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A Review of the Hoverflies (Diptera: Syrphidae) of Sakhalin and the Kuril Islands, with Descriptions of Two New Species

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The hoverflies of Sakhalin and the islands of the Kuril Archipelago are reviewed. In total, 261 species are recognized; 19 other species are listed as doubtful taxa. Two new species are described, one genus and 15 species are placed into synonymy, and 31 are recorded for the first time on Sakhalin and/or the Kuril Islands. Redescriptions or new diagnoses are given for two species, and there are two new combination. References to previous works, geographic distribution, and a list of material examined (including numbers of specimens, localities of capture, and approximate times of the year when the flies are in flight) are given for each species.

Key Words: Hoverflies, Syrphidae, Diptera, Taxonomy, Russian Far East, Sakhalin, Kuril Islands.

Introduction

At the present time the hoverfly fauna of Sakhalin and the Kuril Islands is much better known than that of many other regions of the Russian Far East (Fig. 1). The first and only sound review of the syrphid fauna of this part of the world was published by Violovitsh (1960a), who mentioned 185 species from this region. The main deficiency of Violovitsh's work was his almost complete ignorance of Matsumura's papers (e.g., Matsumura 1911, 1916) in which many new species are described from southern Sakhalin. Only a few of these species were included in Violovitsh's list, but all were mentioned by Shiraki (1930). More recently, additional new species from Sakhalin and/or the Kuril Islands were published by Violovitsh (1975b, c, 1976a, b, 1979b) and Mutin (1986, 1990a). Finally, Peck (1988), in her "Catalogue of Palaearctic Syrphidae," synonymized several of Violovitsh's and Matsumura's species. In the present work we present a new list of the syrphid species occurring in Sakhalin and/or the Kuril Islands, taking into account new faunistic research and recent changes in nomenclature (Table 1). We do not describe the climatic characteristics of the region as this has been done well by Violovitsh (1960a).

Material and Methods

The material examined in this study is housed in the following Institutions: Zoological Institute of the Russian Academy of Sciences (RAS) (ZIN, St. Petersburg), the Zoological Museum of Moscow State University, Institute of Systematics and Ecology of Animals of the Siberian Branch of the RAS (ISEA, Novosibirsk), and the Biological Institute of the Far East Branch of the RAS (Vladivostok). A vast amount of material was collected from Sakhalin and the Kuril Islands by N. A. Violovitsh in the 1950s, and almost 3,000 specimens were collected by A. V. Barkalov during an expedition to southern Sakhalin and Kunashir, southern Kuril Islands, in 1989. A great help in understanding the distribution of species in Sakhalin was provided by A. M. Basarukin, who kindly sent material from northern Sakhalin. Very interesting material was received from Y. Marusik (Magadan), collected by him in 1995 during the International Kuril Island Project, sponsored by the U. S. National Science Foundation, the Japan Society for the Promotion of Science, and the Russian Academy of Sciences, Far East Branch.

The number of syrphid species from Sakhalin and the Kuril Islands now stands at 261 species. Records of 19 species in this region seem questionable for reasons that will be mentioned later. The treatment and arrangement of the genera in the list follow the catalog of Peck (1988), taking into account the papers of Vockeroth (1969) and Vockeroth and Thompson (1987). Species new to Sakhalin and/or the

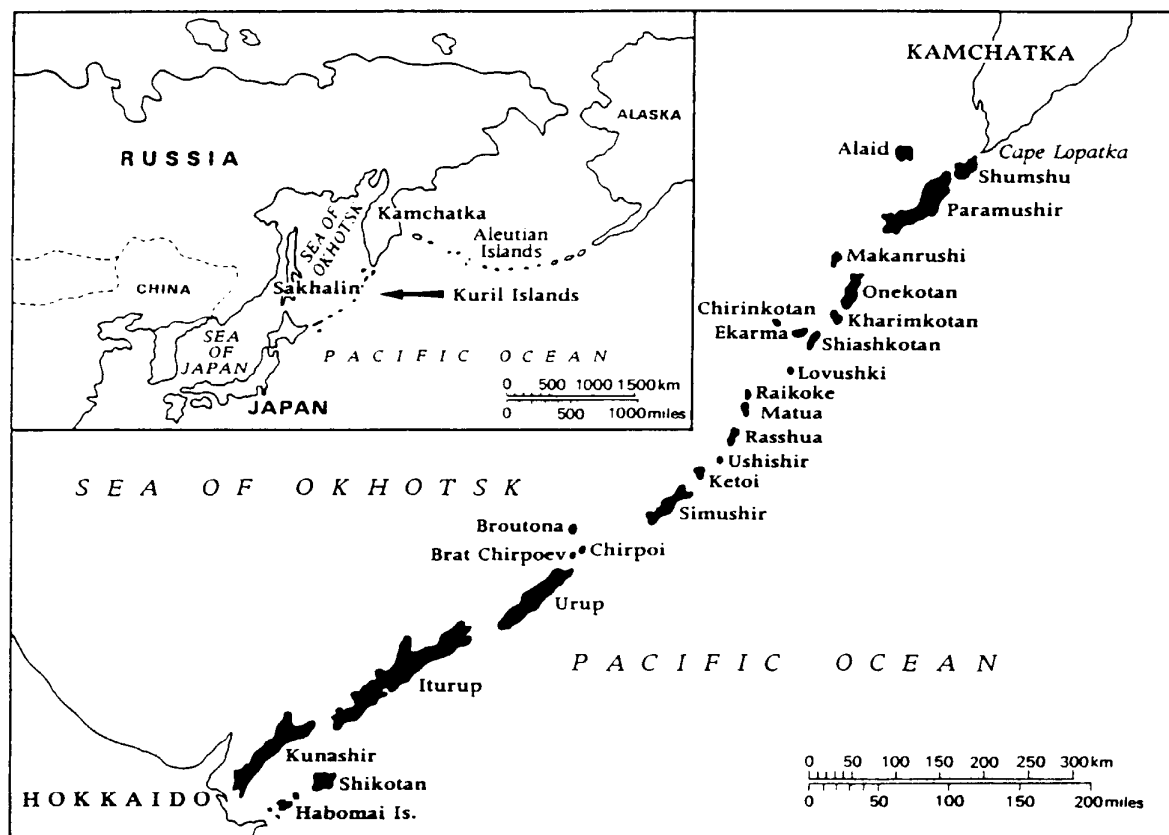


Fig. 1. Sakhalin and the islands of the Kuril Archipelago (modified after Stephan 1974).

Table 1. New taxonomic conclusions and locality records for species of hoverflies presented in this paper.

	Taxon	Species number
New species	<i>Dasysyrphus zinchenkoi</i>	6
	<i>Syrphus annulifemur</i>	65
New species synonyms	<i>Xanthogramma</i> (<i>Olbiosyrphus</i>) <i>eo</i>	72
	<i>Xanthogramma</i> (<i>Olbiosyrphus</i>) <i>udege</i>	72
	<i>Xanthogramma</i> (<i>Olbiosyrphus</i>) <i>sachalinica</i>	73
	<i>Chrysotoxum subbicinctum</i>	78
	<i>Melanostoma elongatum</i>	88
	<i>Neocnemodon nox</i>	106
	<i>Pipiza sachalinica</i>	106
	<i>Pipiza insolata</i>	109
	<i>Neoascia geniculata orientalis</i>	159
	<i>Helophilus</i> (<i>Anasimyia</i>) <i>pygmeus</i>	179
	<i>Helophilus</i> (<i>Anasimyia</i>) <i>inundata</i>	179
	<i>Helophilus</i> (<i>Parhelophilus</i>) <i>insignis</i>	179
	<i>Eristalinus riki</i>	180
	<i>Eristalis pacificus</i>	183
	<i>Parhelophilus obscurior</i>	210
New generic synonym	<i>Narumyia</i> , a junior synonym of <i>Criorhina</i>	217
New combinations	<i>Sphegina</i> (<i>Asiosphegina</i>) <i>elongata</i>	161
	<i>Criorhina narumii</i>	217
Redescribed species	<i>Epistrophe aino</i>	10
	<i>Syrphus dubius</i>	71
New Sakhalin-Kuril Island records	<i>Doros profuges</i>	9
	<i>Epistrophe melanostomoides</i>	14
	<i>Epistrophe olgae</i>	16
	<i>Eupeodes</i> (<i>Eupeodes</i>) <i>latifasciatus</i>	22
	<i>Melangyna</i> (<i>Meligramma</i>) <i>cingulata</i>	40
	<i>Parasyrphus iraidae</i>	45
	<i>Parasyrphus malinellus</i>	48
	<i>Parasyrphus nigratarsis</i>	49
	<i>Sphaerophoria philanthus</i>	59
	<i>Syrphus attenuatus</i>	66
	<i>Syrphus sexmaculatus</i>	68
	<i>Xanthogramma laetum</i>	72
	<i>Platycheirus</i> (<i>Pachysphyria</i>) <i>immaculatus</i>	86
	<i>Pipiza bimaculata</i>	106
	<i>Chamaesyrphus scaevoides</i>	112
	<i>Cheilosia</i> (<i>Cartosyrphus</i>) <i>nox</i>	130
	<i>Chrysosyrphus niger</i>	153
	<i>Orthonevra stackelbergi</i>	156
	<i>Arctosyrphus willingi</i>	176
	<i>Eristalis</i> (<i>Eoseristalis</i>) <i>rossica</i>	188
	<i>Mallota eurasiatica</i>	203
	<i>Xylota</i> (<i>Xylota</i>) <i>jakutorum</i>	254
	<i>Xylota</i> (<i>Xylota</i>) <i>nartshukae</i>	257
	<i>Betasyrphus nipponensis</i>	2
	<i>Sphaerophoria virgata</i>	64
	<i>Syrphus dubius</i>	71
	<i>Platycheirus</i> (<i>Platycheirus</i>) <i>europaeus</i>	92
	<i>Sphegina</i> (<i>Asiosphegina</i>) <i>elongata</i>	161
	<i>Criorhina narumii</i>	217
	<i>Temnostoma nitobei</i>	234
	<i>Chalcosyrphus</i> (<i>Xylotodes</i>) <i>nigricans</i>	244

Kuril Islands are indicated by an asterisk (*). Collecting sites on Sakhalin are shown in Fig. 2; those on Kunashir, southern Kuril Islands, in Fig. 3. The approximate times of the year when the species were found to be in flight are indicated by month.

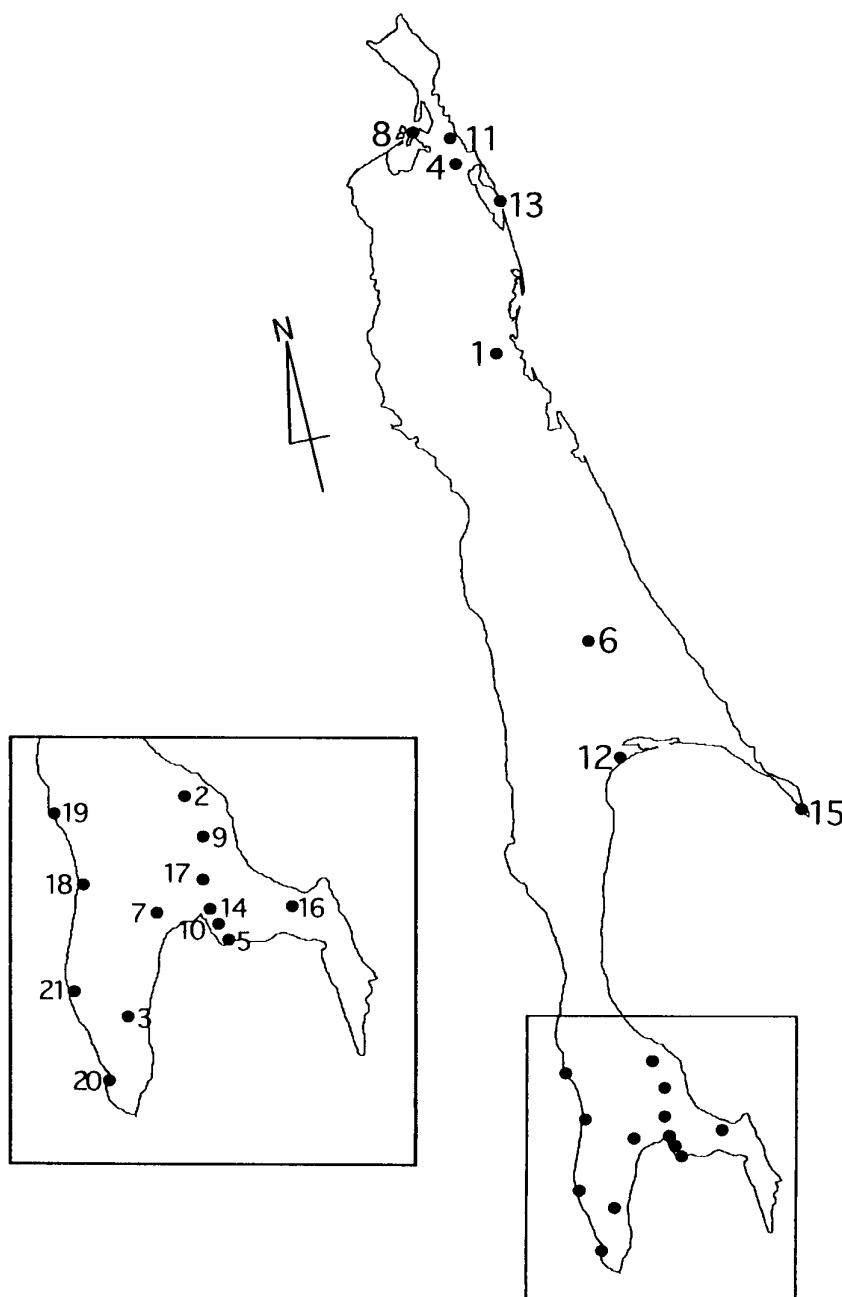


Fig. 2. Collecting sites on Sakhalin Island: 1) Dagi River; 2) Dolinsk Settlement; 3) Kirilovo Settlement; 4) Kolendo Settlement; 5) Korsakov Town; 6) Langeri Settlement; 7) middle part of Lutoga River; 8) Moskalyvo Settlement; 9) Novoaleksandrovsk Settlement; 10) Ogonyki Station; 11) Okhinskii District; 12) Paramai Settlement; 13) Pilytun Bay; 14) Solovyevka Village; 15) Cape Terpeniya; 16) Lake Tunaicha; 17) Yuzhno-Sakhalinsk; 18) Kholmsk; 19) Cape Slepikovskogo; 20) Kuznetsovo Settlement; 21) Gornozavodsk Settlement.

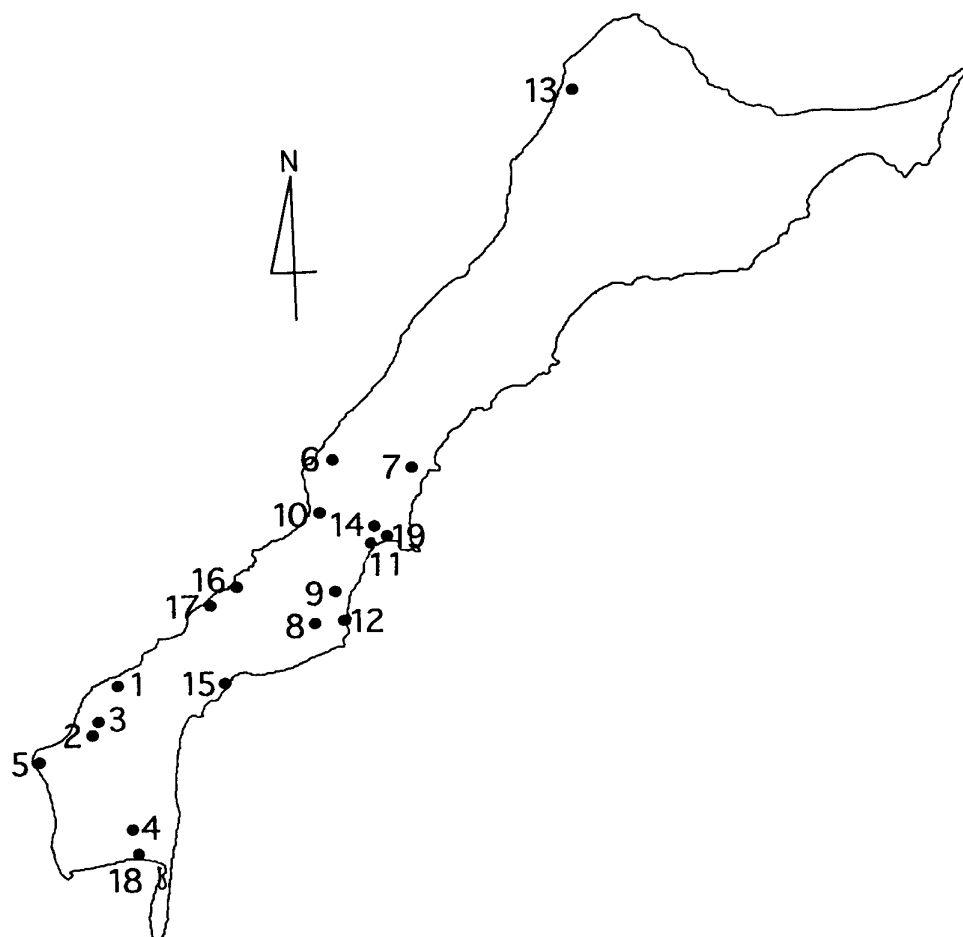


Fig. 3. Collecting sites on Kunashir Island, southern Kuril Islands: 1) Alekhino; 2) Golovnina Volcano; 3) Lake Goryachee; 4) Dubovoe; 5) Cape Ivanovskii; 6) Ilyinskoe; 7) Kamyshovaya River; 8) Kislyi Spring; 9) Kosmodemyansk Settlement; 10) Lake Lagunnoe; 11) Lesnaya River; 12) Mendeleevo Settlement; 13) Severyanka; 14) Lake Serebryannoe; 15) Sernovodsk Settlement; 16) Cape Stolbchatyi; 17) Tretyyakovo Settlement; 18) Golovnino Settlement; 19) Yuzhno-Kurilsk Settlement.

List of Species

1. *Asiodidea nikkoensis* (Matsumura, 1916)

References: Violovitsh 1960a: 232, 1976a: 331, 1982: 192, 1983: 49; Stackelberg 1965: 909; Kuwayama 1967: 116.

Distribution: Kunashir, Iturup, Shikotan; Honshu; China.

Material examined: 35 males, 25 females, Kunashir: 1, 5, 11, 18, 19 (Fig. 3); Iturup: Kurilsk; Shikotan: Malo-Kurilsk; July-September.

2. *Betasyrphus nipponensis* (Van der Goot, 1964) *

References: Violovitsh 1982: 190 (*B. serarius* Wiedemann); Peck 1983: 13 (*B. serarius* Wiedemann).

Distribution: Sakhalin, Kunashir; Priamurye, Primorye; Shikoku, Kyushu.

Material examined: 1 male, Kunashir: 11 (Fig. 3); July.

Note: All the material examined from the Russian Far East identified as *Betasyrphus serarius* Wiedemann appears to be *B. nipponensis*, a species formerly known from the Japanese islands of Shikoku and Kyushu (Ôhara, 1984), where it has been found at elevations of 1,500 m. The mountain distribution of *B. nipponensis* suggests that it is more cold-adapted than *B. serarius*, which is common in the south of Japan. We therefore conclude that *B. serarius* is absent from Sakhalin and the Kuril Islands.

3. *Dasysyrphus bilineatus* (Matsumura, 1917)

References: Violovitsh 1960a: 234 (*Syrphus*), 1976a: 330, 1982: 191, 1983: 38 (as a subgenus of *Syrphus*); Kuwayama 1967: 116 (*Syrphus*); Peck 1988: 14.

Distribution: Sakhalin, Kunashir, Shikotan; Priamurye, Primorye; Korea; Hokkaido, Honshu, Shikoku; Oriental Region.

Material examined: 4 males, 1 female, Sakhalin: 20 (Fig. 2); Kunashir: 11 (Fig. 3); July-August.

4. *Dasysyrphus tricinatus* (Fallén, 1817)

References: Violovitsh 1960a: 238 (*Syrphus*), 1976a: 330, 1982: 192, 1983: 38 (as a subgenus of *Syrphus*); Kuwayama 1967: 117.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 4 males, 8 females, Sakhalin: 14, 17 (Fig. 2); June.

5. *Dasysyrphus venustus* (Meigen, 1822)

References: Violovitsh 1960a: 238 (*Syrphus*), 1976a: 330 (*Dasysyrphus arcuatus* Fallén), 1982: 191 (*D. arcuatus*, *D. hilaris* Zetterstedt), 1983: 39 (*Syrphus arcuatus*, *S. venustus*).

Distribution: Sakhalin, Kunashir, Iturup; Holarctic.

Material examined: 158 males, 210 females, Sakhalin: 5, 7, 12, 13, 14, 17 (Fig. 2); Kunashir: 5 (Fig. 3); June-July.

Note: This highly variable species is badly in need of detailed taxonomic study.

6. *Dasysyrphus zinchenkoi* Mutin and Barkalov, n. sp. (Fig. 4)

Distribution: Sakhalin and Kunashir Island.

Holotype: ISEA, male, Kunashir Island, near Yuzhno-Kurilsk, A. Barkalov, 2 July 1989.

Paratypes: ISEA and ZIN: 43 males, 22 females, Sakhalin: Yuzhno-Sakhalinsk, Solovyevka Settlement, Vtoraya Pady Station, A. Barkalov and V. Zinchenko, 15-28 June 1989; Kunashir: Yuzhno-Kurilsk, Golovnina Volcano, Lesnaya River, A. Barkalov and V. Zinchenko, 2-11 July 1989.

Diagnosis: With genitalia similar to those of *D. flavolunulatus* Peck, 1974, and *D. lenensis* Bagatshanova, 1980, but differing from *D. flavolunulatus* in having darker legs, fine dusting on body, and black hairs on face and genitalia; differing from *D. lenensis* in narrower frons of male (in *D. lenensis*, angle formed by frons is 110°) and in having darker legs (in *D. lenensis*, apical half of front and middle femora yellow, basal and middle portions of hind tibiae also yellow). Habitat occupied by *D. zinchenkoi* similar to that of *D. lunulatus*, but former species differing in genitalia morphology, black pilosity of face, and darker legs.

Description of males: Body length 9.0-9.5 mm. Face yellow with broad, black, medial stripe not narrowing at base of antenna; covered with dark brown hairs (Fig. 4A). Genae and epistoma black. Frons black, anterior half highly reflective, posterior half with light dusting, covered with black hairs. Angle of frons slightly more than 90°. Antennae completely black (Fig. 4C). Eyes with dense, brown hairs. Mesonotum black, reflective, with light hairs. Scutellum yellow with black hairs. Legs primarily black, apical length of leg one fourth to one fifth length of femora; basal portion of hind tibiae and full length of front and middle tibiae and tarsi yellow, more or less darkened medially. Pterostigma dark brown.

Abdomen black, with narrow, hook-shaped, yellow spots on tergites II-IV, spots not reaching sides of tergite (Fig. 4B). Sternites II-IV with dark brown stripes. Genitalia with black hairs (Fig. 4D, E).

Description of females: Similar to males. Body length 8.5-9.0 mm. Frons and vertex black, highly reflective, with black hairs; posterior part of frons with band of grey dusting, usually broken in middle. Other characters as for male.

Etymology: This new species is named in honor of an excellent collector of insects, V. K. Zinchenko.

7. *Didea alneti* (Fallén, 1817)

References: Matsumura and Adachi 1917a: 138 (*D. japonica* Matsumura, *D. sachalinensis* Matsumura); Shiraki 1930: 337; Violovitsh 1960a: 232, 1976a: 331, 1982: 192, 1983: 48; Kuwayama 1967: 116; Peck 1988: 17.

Distribution: Sakhalin, Kuril Islands; Holarctic.

Material examined: 16 males, 12 females, Sakhalin: 7, 14, 17 (Fig. 2); Kunashir: 1, 11 (Fig. 3); Iturup; June-August.

8. *Didea fasciata* Macquart, 1834

References: Violovitsh 1960a: 233, 1976a: 331, 1982: 192, 1983: 48; Kuwayama 1967: 116.

Distribution: Sakhalin, Kuril Islands; Palaearctic and Oriental regions.

Material examined: 12 males, 6 females, Sakhalin: 7, 14, 17, 20 (Fig. 2); Kunashir: 11, 19 (Fig. 3); June-September.

9. *Doros profuges* (Harris, 1780) *

Distribution: Kunashir; Palaearctic.

Material examined: 1 female, Kunashir: 5 (Fig. 3); July.

10. *Epistrophe aino* (Matsumura, 1917)

References: Violovitsh 1960a: 233 (*Syrphus*); Kuwayama 1967: 116; Mutin 1986: 831 (in part).

Distribution: Sakhalin, Kunashir, Shikotan; Transbaikalia, Primorye, Priamurye; Hokkaido.

Material examined: 21 males, 15 females, Sakhalin: 14 (Fig. 2); Kunashir: 5, 11, 19 (Fig. 3); Zelionyi; July-August.

Note: *Epistrophe aino* was originally described as a species of *Syrphus*, subgenus *Macrosyrphus*, but from the description it is clearly a member of the genus *Epistrophe*. Another species with the same specific name, *Metasyrphus aino* Matsumura, 1918, was described a year later, but it belongs to the genus *Eupeodes*. These two species were synonymized by Peck (1988), but we think this is wrong and therefore give a redescription of *Epistrophe aino* based on the original description and on additional

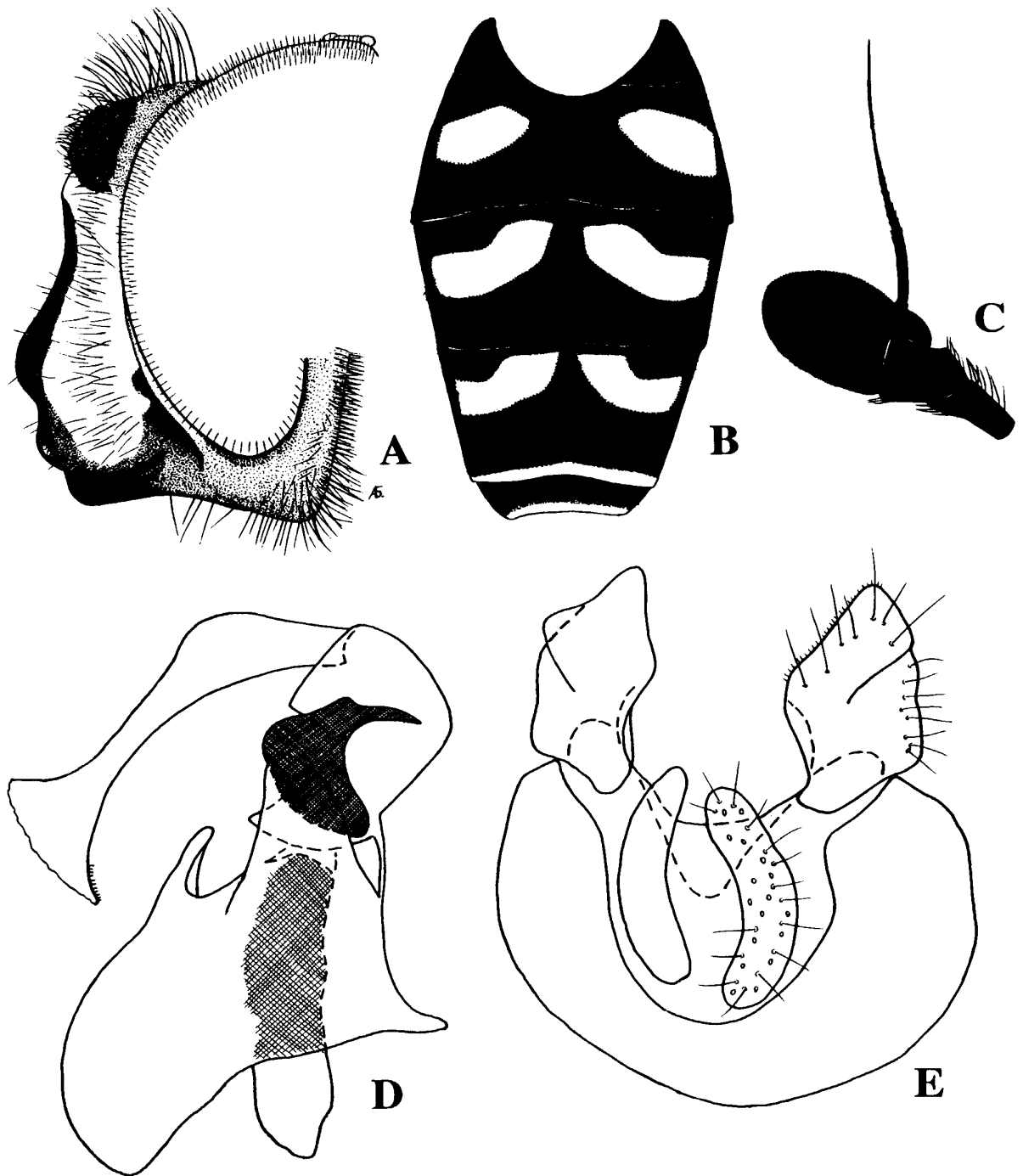


Fig. 4. *Dasysyrphus zinchenkoi* Mutin and Barkalov, n. sp.: A. Face in profile; B. Abdomen; C. Antenna; D. Genitalia of male, lateral view; E. Genitalia of male, anterior view.

material collected from Sakhalin, the Kuril Islands, and southern Primorye.

Description of male: Face yellow with light colored hairs and dense white dusting on sides. Frons translucent anteriorly, with dense grey dusting and golden hairs posteriorly (sometimes mixed with some black hairs). Antennae yellow with black arista, third antennal segment sometimes dark apically. Eyes bare. Vertex primarily

with brown hairs, its length slightly longer than connection between eyes. Mesonotum dark golden-grey in anterior half, with pair of longitudinal stripes of light dusting. Pleurae and sides of mesonotum with dense, light-colored dusting. Scutellum yellow, posterior half covered with black hairs. Legs yellow, posterior tarsi brown, posterior tibiae dark medially and dorsally. Apical half of posterior femora with black hairs. Abdomen with broad yellow spots on tergite II and broad yellow stripes on tergites III-IV; width of stripes more than two-thirds of tergite length. Sternites yellow.

Description of female: Similar to male, but differing in having dorsal part of third antennal segment dark, a yellow stripe on tergite II, and posterior tibiae completely yellow. Pilosity of frons and scutellum usually light. Pleurae and sides of mesonotum yellow with dense, light-colored dusting.

11. *Epistrophe griseofasciata* (Matsumura, 1918)

References: Violovitsh 1956b: 744 (*Syrphus angustifasciatus* Violovitsh), 1960a: 233 (*S. angustifasciatus*), 1976a: 328 (*Epistrophe angustifasciata*), 1982: 189 (*E. angustifasciata*), 1983: 44 [*Syrphus* (*Epistrophe*) *angustifasciatus*]; Kuwayama 1967: 116 (*Syrphus*); Peck 1985: 396, 1988: 20.

Distribution: Sakhalin, Kunashir; Hokkaido.

Material examined: 7 males, 9 females, Sakhalin: 15, 17 (Fig. 2); Kunashir: 11 (Fig. 3); July-August.

12. *Epistrophe grossulariae* (Meigen, 1822)

References: Violovitsh 1960a: 235 (*Syrphus*), 1976a: 328, 1982: 189, 1983: 41 (as subgenus of *Syrphus*).

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 1 male, 1 female, Kunashir: 5 (Fig. 3); August.

13. *Epistrophe melanostoma* (Zetterstedt, 1843)

References: Violovitsh 1960a: 236 (*Syrphus*), 1976a: 329, 1982: 189; Kuwayama 1967: 117.

Distribution: Sakhalin, Kunashir, Shikotan; Palaearctic.

Material examined: 1 male, 1 female, Sakhalin: 13 (Fig. 2); July.

14. *Epistrophe melanostomoides* (Strobl, 1880) *

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 4 females, Sakhalin: 7 (Fig. 2); Kunashir: 5 (Fig. 3); June-July.

15. *Epistrophe nitidicollis* (Meigen, 1822)

References: Violovitsh 1983: 41 (as subgenus of *Syrphus*).

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 2 males, 1 female, Kunashir: 1, 3 (Fig. 3); June.

16. *Epistrophe olgae* Mutin, 1990 *

Distribution: Kunashir; Primorye, Priamurye.

Material examined: 1 male, Kunashir: 5 (Fig. 3); July.

17. *Epistrophe* sp. A

Distribution: Sakhalin, Kunashir; Primorye.

Material examined: 6 males, 3 females, Sakhalin: 17 (Fig. 2); Kunashir: 5, 19 (Fig. 3).

Note: This species is similar to *Epistrophe aino*, from which it differs in having black

spots above the lunula, completely black pilosity of the frons, and narrower yellow bands on tergites III-IV, their width usually being less than half of the tergite width. The males also differ in the yellow hind tibiae, and females in the broken yellow band on tergite II.

18. *Episyrphus balteatus* (Degeer, 1776)

References: Matsumura and Adachi 1917b, 16; Violovitsh 1960a: 234 (*Syrphus*), 1976a: 330, 1982: 192; Kuwayama 1967: 116 (*Epistrophe*).

Distribution: Sakhalin, Kuril Islands; Palaearctic, Oriental Region, Australia.

Material examined: 137 males, 104 females, Sakhalin: 3, 5, 7, 9, 11, 14, 16, 17, 18 (Fig. 2); Kunashir: 1, 2, 5, 11, 12, 15, 19 (Fig. 3); Zelionyi; Moneron; Shikotan; Yurii; June-August.

19. *Eriozona (Eriozona) syrphoides* (Fallén, 1817)

References: Violovitsh 1960a: 231, 1976a: 330, 1982: 193, 1983: 36.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 2 females, Sakhalin: 7 (Fig. 2); Kunashir: 11 (Fig. 3); August.

20. *Eriozona (Megasyrphus) erratica* (Linnaeus, 1758)

References: Violovitsh 1960a: 234 (*Syrphus annulipes*), 1976a: 330 (*Syrphoides annulipes*), 1982: 192 (*Megasyrphus annulipes*), 1983: 38 (*M. annulipes*).

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 2 males, 1 female, Sakhalin: Aleksandrovsk Settlement; Kunashir; July-August.

21. *Eupeodes (Eupeodes) corollae* (Fabricius, 1794)

References: Matsumura and Adachi 1917b: 15 (*Metasyrphus*); Violovitsh 1960a: 235 (*Syrphus*), 1976a: 329 (*Metasyrphus*), 1982: 190 (*Metasyrphus*); Kuwayama 1967: 117 (*Metasyrphus*).

Distribution: Sakhalin, Kuril Islands; Holarctic, Oriental Region.

Material examined: 21 males, 28 females, Sakhalin: 3, 9, 12, 13, 17 (Fig. 2); Zelionyi; Iturup; Cape Burevestnik; Paramushir: Severo-Kurilsk; Shumshu; Yurii.

22. *Eupeodes (Eupeodes) latifasciatus* (Macquart, 1829) *

Distribution: Sakhalin; Palaearctic, Oriental Region.

Material examined: 5 males, Sakhalin: 14 (Fig. 2).

23. *Eupeodes (Eupeodes) lundbecki* (Soot-Ryen, 1946)

References: Violovitsh 1982: 190 (*Postosyrphus*).

Distribution: Sakhalin, Kuril Islands; Palaearctic.

Material examined: 9 males, 11 female, Sakhalin: 7, 17, 20 (Fig. 2); Paramushir; Shikotan; Shumshu; May-August.

24. *Eupeodes (Eupeodes) luniger* (Meigen, 1822)

References: Violovitsh 1960a: 236 (*Syrphus*), 1976a: 329 (*Metasyrphus*), 1982: 190 (*Postosyrphus*), 1983: 43 (*Postosyrphus* as subgenus of *Syrphus*); Kuwayama 1967: 117 (*Syrphus*).

Distribution: Sakhalin, Kuril Islands; Holarctic, Oriental Region.

25. *Eupeodes (Eupeodes) nitens* (Zetterstedt, 1843)

References: Violovitsh 1960a: 237 (*Syrphus*), 1976a: 329 (*Metasyrphus*), 1982: 190 (*Postosyrphus*); Kuwayama 1967: 117 (*Metasyrphus*).

Distribution: Sakhalin, Shikotan; Palaearctic.

Material examined: 1 male, 1 female, Sakhalin.

26. *Eupeodes (Eupeodes) punctifer* (Frey and Kanervo, 1934)

References: Violovitsh 1982: 190 (*Postosyrphus*), 1983: 43 (*Postosyrphus*, as subgenus of *Syrphus*).

Distribution: Sakhalin?; Palaearctic.

27. *Eupeodes (Lapposyrphus) lapponicus* (Zetterstedt, 1838)

References: Violovitsh 1960a: 236 (*Syrphus*), 1976a: 329 (*Metasyrphus*).

Distribution: Sakhalin; Holarctic.

Material examined: 7 males, 17 females, Sakhalin: 3, 9, 11-13, 16, 17 (Fig. 2); May-August.

28. *Ischiodon scutellaris* (Fabricius, 1805)

References: Violovitsh 1982: 193, 1983: 54.

Distribution: Sakhalin, Kunashir; southern Palaearctic; Oriental Region; New Guinea.

Note: Although absent from our material from the islands of the Far East, we do not doubt the records of Violovitsh (1982, 1983).

29. *Ischyrosyrphus glaucius* (Linnaeus, 1758)

References: Matsumura 1911: 77 (*Chamaesyrphus miyakei* Matsumura); Violovitsh 1960a: 232, 1976a: 329 (*Leucozona*), 1982: 189, 1983: 36; Kuwayama 1967: 116; Peck 1988: 24.

Distribution: Sakhalin, Kunashir, Iturup; Palaearctic.

Material examined: 44 males, 27 females, Sakhalin: 5, 7, 14, 17, 20, 21 (Fig. 2); Kunashir: 2, 5, 8, 9, 11, 19 (Fig. 3); July-August.

30. *Ischyrosyrphus laternarius* (Müller, 1776)

References: Matsumura 1918: 10 (*Karasyrphus sachalinensis* Matsumura); Violovitsh 1960a: 232, 1976a: 329 (*Leucozona*), 1982: 190, 1983: 36; Kuwayama 1967: 116; Peck 1988: 24.

Distribution: Sakhalin, Kuril Islands; Palaearctic.

Material examined: 56 males, 64 females, Sakhalin: 7, 9, 14, 17, 18, Leonidovo Settlement (Fig. 2); Kunashir: 5, 11, 16, 19, Vodopadnoe Settlement (Fig. 3); July-August.

31. *Leucozona lucorum* (Linnaeus, 1758)

References: Violovitsh 1960a: 231, 1976a: 329, 1982: 189, 1983: 35; Kuwayama 1967: 115.

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 30 males, 25 females, Sakhalin: 7, 17, 21 (Fig. 2); Kunashir: 1, 5, 11, 12, 19 (Fig. 3); June-August.

32. *Melangyna (Melangyna) arsenjevi* Mutin, 1986

References: Stackelberg 1970: 33 (*Syrphus savtshenkoi* Violovitsh, *sensu* Stackelberg); Mutin 1986: 828.

Distribution: Sakhalin, Kuril Islands; northwest Russia, Priamurye, Primorye.

Material examined: 25 males, 36 females, Sakhalin: 6 (Fig. 2); Kunashir: 8, 9, 11, 19 (Fig. 3); Iturup, Paramushir: Severo-Kurilsk; Shikotan; Shpanberg; June-September.

33. *Melangyna (Melangyna) barbifrons* (Fallén, 1817)

References: Matsumura and Adachi 1917a: pl. VI, Fig. 34, 1917b: 15 (*Stenosyrphus motodomariensis* Matsumura); Violovitsh, 1960a: 234 (*Syrphus*), 1976a: 328, 1982: 188, 1983: 45 (*Melangyna* as subgenus of *Syrphus*); Kuwayama 1967: 116 (*Epistrophe*); Peck 1988: 27.

Distribution: Sakhalin, Kuril Islands; Palaearctic.

Material examined: 6 males, 53 females, Sakhalin: 17 (Fig. 2); June-September.

Note: Shiraki (1930) considered *Stenosyrphus motodomariensis* Matsumura, 1911, to be a synonym of *Melangyna barbifrons* (Fallén). He wrote that the material examined by him was collected on Sakhalin in August, but *M. barbifrons* is a typical spring species and does not fly in August. The description and drawings of *Stenosyrphus motodomariensis* show that it is closer to *M. arsenjevi*, which flies at the same time. Assessment of the correct taxonomic status of *S. motodomariensis* requires study of the type material.

34. *Melangyna (Melangyna) compositarum* (Verrall, 1873)

References: Violovitsh 1960a: 235 (*Syrphus*), 1976a: 328, 1982: 188, 1983: 46 (*Melangyna* as subgenus of *Syrphus*); Kuwayama 1967: 116 (*Syrphus*).

Distribution: Sakhalin, Kuril Islands; Holarctic.

Material examined: 11 males, 12 females, Sakhalin: 13, 14, 17 (Fig. 2); Kunashir: 5, 19 (Fig. 3); Iturup, Urup; June-September.

35. *Melangyna (Melangyna) lasiophthalma* (Zetterstedt, 1843)

References: Matsumura and Adachi 1917b: 15 (*Stenosyrphus lasiophthalmus* var. *saghalinensis* Matsumura); Shiraki 1930: 362 (*Syrphus*); Violovitsh 1960a: 236 (*Syrphus*), 1976a: 328, 1982: 189, 1983: 40 (*Melangyna* as subgenus of *Syrphus*); Peck 1988: 28.

Distribution: Sakhalin; Palaearctic.

Material examined: 5 males, Sakhalin: 20, Aniva Settlement (Fig. 2); May.

Note: We refer to insufficiently studied material in the ZIN collection, labeled by Violovitsh as "*M. lasiophthalma*."

36. *Melangyna (Melangyna) olsufjevi* (Violovitsh, 1956)

References: Violovitsh 1956b: 742 (*Syrphus*), 1960a: 237 (*Syrphus*), 1976a: 328, 1982: 198, 1983: 40 (*Melangyna* as subgenus of *Syrphus*); Peck 1988: 28.

Distribution: Sakhalin; Primorye, Priamurye.

Material examined: 5 males, Sakhalin: 17 (Fig. 2); May-July.

37. *Melangyna (Melangyna) pavlovskyi* (Violovitsh, 1956)

References: Violovitsh 1956b: 741 (*Syrphus*), 1960a: 237 (*Syrphus*), 1976a: 328, 1982: 189, 1983: 40 (*Melangyna* as subgenus of *Syrphus*); Peck 1988: 28.

Distribution: Sakhalin, Kunashir; Primorye, Priamurye.

Material examined: 5 males, 18 females, Sakhalin: 17 (Fig. 2); Kunashir: near Severyanka Settlement (Fig. 3).

38. *Melangyna (Melangyna) quadrimaculata* (Verrall, 1873)

References: Violovitsh 1960a: 231 (*Syrphus*), 1976a: 328, 1982: 189, 1983: 40 (*Melangyna* as subgenus of *Syrphus*).

Distribution: Sakhalin; Palaearctic.

Material examined: 4 males, 20 females, Sakhalin: 17 (Fig. 2); May.

39. *Melangyna (Melangyna) umbellatarum* (Fabricius, 1794)

References: Violovitsh 1976a: 238 (*Syrphus*), 1982: 189.

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 2 males, 2 females, Sakhalin: 14 (Fig. 2); Kunashir: 5 (Fig. 3); June-July.

40. *Melangyna (Meligramma) cingulata* (Egger, 1860) *

Distribution: Sakhalin, Kunashir; Europe, Southern Siberia, Priamurye.

Material examined: 4 males, 7 females, Sakhalin: 14, 17 (Fig. 2); Kunashir: 7, 18, 19 (Fig. 3); June-August.

41. *Melangyna (Meligramma) guttata* (Fallén, 1817)

References: Violovitsh 1960a: 235 (*Syrphus*), 1976a: 330 (*Meligramma*), 1982: 191 (*Meligramma*), 1983: 40 (*Meligramma* as subgenus of *Syrphus*).

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 1 male, 4 females, Sakhalin: 5, 11 (Fig. 2); Kunashir: 13 (Fig. 3); July-August.

42. *Melangyna (Meligramma) triangulifera* (Zetterstedt, 1843)

References: Violovitsh 1960a: 237 (*Syrphus*), 1976a: 330 (*Meligramma*), 1982: 191 (*Meligramma*), 1983: 45 (*Meligramma* as subgenus of *Syrphus*).

Distribution: Sakhalin; Holarctic.

43. *Meliscaeva cinctella* (Zetterstedt, 1843)

References: Matsumura and Adachi 1917b: 18 (*Episyrphus*); Violovitsh 1960a: 234 (*Syrphus*), 1976a: 330, 1982: 192, 1983: 43 (*Meliscaeva* as subgenus of *Syrphus*); Kuwayama 1967: 116 (*Epistrophe*).

Distribution: Sakhalin, Kuril Islands; Holarctic; Oriental Region.

Material examined: 100 males, 94 females, Sakhalin: 7, 9, 11, 14, 17 (Fig. 2); Kunashir: 3, 5, 6, 10, 11, 19 (Fig. 3); Iturup; Shikotan; Shpanberg; July-September.

44. *Parasyrphus annulatus* (Zetterstedt, 1838)

References: Violovitsh 1960a: 233 (*Syrphus*), 1976a: 329 (*Phalacrodira*), 1982: 191 (*Mesosyrphus*), 1983: 44 (*Mesosyrphus* as subgenus of *Syrphus*); Mutin 1990a: 137.

Distribution: Sakhalin, Kunashir, Moneron; Palaearctic.

Material examined: 50 males, 57 females, Sakhalin: 5, 7, 14, 17, 18, 20, Aleksandrovsk Settlement, Ilyinskoe Settlement (Fig. 2); Kunashir: 19 (Fig. 3); Moneron; May-July.

45. *Parasyrphus iraidae* Mutin, 1987 *

Distribution: Sakhalin, Kunashir; Priamurye, Primorye.

Material examined: 6 males, Sakhalin: 14 (Fig. 2); Kunashir: 1, 19 (Fig. 3); May-July.

46. *Parasyrphus lineola* (Zetterstedt, 1843)

References: Violovitsh 1960a: 236 (*Syrphus*); 1976a: 330, 1982: 191 (*Mesosyrphus*), 1983: 44 (*Mesosyrphus* as subgenus of *Syrphus*); Mutin 1990a: 141.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 5 males, 7 females, Sakhalin: 14 (Fig. 2); Kunashir: 19 (Fig. 3); June-July.

47. *Parasyrphus makarkini* Mutin, 1990

References: Mutin 1990a: 143.

Distribution: Sakhalin, Kunashir.

Material examined: 17 males, 10 females, Sakhalin: 14, 17 (Fig. 2); Kunashir: 19 (Fig.

3). June-July.

48. *Parasyrphus malinellus* (Collin, 1952) *

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 1 male, 9 females, Sakhalin: 10, 14, 16 (Fig. 2); Kunashir: 19 (Fig. 3); June-July.

49. *Parasyrphus nigratarsis* (Zetterstedt, 1843) *

Distribution: Kunashir; Palaearctic.

Material examined: 2 males, Kunashir: 19 (Fig. 3); July.

50. *Parasyrphus punctulatus* (Verrall, 1873)

References: Mutin 1990a: 148.

Distribution: Sakhalin, Kunashir, Moneron; Palaearctic.

Material examined: 5 males, 47 females, Sakhalin: 7, 14, 17, 19, Vtoraya Pady Station (Fig. 2); Kunashir: 5, 8, 19 (Fig. 3); Moneron; June-July, September.

51. *Parasyrphus tarsatus* (Zetterstedt, 1838)

References: Mutin 1990a: 150.

Distribution: Kunashir, Paramushir; Holarctic.

Material examined: 4 males, 8 females, Kunashir: 5 (Fig. 3); Paramushir: Severo-Kurilsk; Simushir; July-August.

52. *Scaeva komabensis* (Matsumura, 1917)

References: Kuznetsov 1985: 404; Hirashima 1989: 785.

Distribution: Kunashir, Moneron; Priamurye, Primorye; Hokkaido, Honshu, Shikoku, Kyushu.

Material examined: 2 females, Kunashir: 11 (Fig. 3); Moneron; August.

53. *Scaeva pyrastris* (Linnaeus, 1758)

References: Violovitsh 1960a: 233, 1975a: 177, 1976a: 329, 1982: 190, 1983: 47.

Distribution: Sakhalin; Holarctic.

54. *Sphaerophoria chongjini* Bańkowska, 1964

References: Bańkowska 1964: 347; Kuwayama 1967: 118; Violovitsh 1976a: 331.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 5 males, Sakhalin: 7, 14, Noglinskii District (Fig. 2); Kunashir, 5 (Fig. 3); July-August.

55. *Sphaerophoria formosana* (Matsumura, 1916)

References: Kuwayama 1967: 118.

Distribution: Kunashir; Oriental Region.

Note: We have not examined material of this species and as far as we know it has been recorded from Kunashir only by Kuwayama (1967). Shiraki (1930) listed it as a synonym of *Sphaerophoria cylindrica* Say, together with *S. indiana* Bigot.

56. *Sphaerophoria indiana* Bigot, 1884

References: Violovitsh 1960a: 240 (*Sphaerophoria menthastri* in part), 1976a: 331, 1982: 193, 1983: 52.

Distribution: Sakhalin, Kunashir; Central and East Asia; Oriental Region.

Material examined: 120 males, 45 females, Sakhalin: 5, 7, 9, 14, 17, Vtoraya Pady Station (Fig. 2); Kunashir: 1, 4, 5, 18, 19 (Fig. 3); June-August.

57. *Sphaerophoria kaa* Violovitsh, 1960**References:** Violovitsh, 1960b: 206, 1976a: 331, 1982: 193, 1983: 52**Distribution:** Sakhalin, Kuril Islands?; Mongolia, Kamchatka.**Material examined:** 4 males, Sakhalin: 65 km from Cape Terpeniya; July.58. *Sphaerophoria macrogaster* (Thompson, 1869)**References:** Bańkowska 1964: 339 (*Sphaerophoria koreana* Bańkowska); Kuwayama 1967: 118 (*S. koreana*); Violovitsh 1982: 193.**Distribution:** Kunashir; East Asia; Oriental Region; New Guinea, New Caledonia; Australia.**Material examined:** 9 males, Sakhalin: 19 (Fig. 2); Kunashir: 18, 19 (Fig. 3); July-August.59. *Sphaerophoria philanthus* (Meigen, 1822) ***References:** Violovitsh 1960a: 239 (*Sphaerophoria menthastri* in part).**Distribution:** Sakhalin, Kuril Islands; Holarctic.**Material examined:** 21 males, Sakhalin: 9, 13, 65 km from Cape Terpeniya (Fig. 2); Paromai; Shumshu; July-August.60. *Sphaerophoria rueppelli* (Wiedemann, 1830)**References:** Violovitsh 1960a: 239 (*Sphaerophoria cylindrica*), 1976a: 331, 1982: 193, 1983: 53.**Distribution:** Sakhalin, Kunashir?; Palaearctic.**Material examined:** 10 males, 1 female, Sakhalin: 9, 17, Anivskii District (Fig. 2). July-August.61. *Sphaerophoria scripta* (Linnaeus, 1758)**References:** Violovitsh 1976a: 331, 1982: 193.**Distribution:** Sakhalin, Kuril Islands; Holarctic, Oriental Region.**Note:** Although recorded from Sakhalin and the Kuril Islands, this species is not present in our material. In Primorye and Priamurye it inhabits agrocoenoses and other anthropogenic habitats.62. *Sphaerophoria shirchan* Violovitsh, 1957**References:** Violovitsh 1957: 751, 1960a: 240, 1976a: 332, 1982: 193, 1983: 53; Kuwayama 1967: 118; Peck 1988: 46.**Distribution:** Sakhalin, Kunashir; Palaearctic.**Material examined:** 1 male, 5 females, Sakhalin: 17 (Fig. 2); Kunashir: 11 (Fig. 3); June-July.63. *Sphaerophoria taeniata* (Meigen, 1822)**References:** Matsumura and Adachi 1917b: 22 (*Melithreptus*).**Distribution:** Sakhalin?; Palaearctic.**Note:** We did not find this species in our material.64. *Sphaerophoria virgata* Goeldlin de Tiefenau, 1974 ***Distribution:** Sakhalin; Western Europe.**Material examined:** 4 males, Sakhalin: 13 (Fig. 2); August.**Note:** Specimens from Sakhalin were compared with Central European material determined by C. Claussen and T. Nielsen. We also compared our material with the drawings provided by Torp (1984) and found no differences.

65. *Syrphus annulifemur* Mutin, n. sp. (Fig. 5)

Distribution: From Altai to the Far East.

Holotype: ZIN, male, Khabarovskii Region, Myaochan Range, environs of Gornyi Settlement, on *Salix* sp., Mutin, 28 May 1988.

Paratypes: ISEA, ZIN, and Mutin collection: 11 males, 8 females, data as for holotype, Mutin, 9 June 1983, 30 May 1987, 28 May 1988; 1 female, West Sayan, 70 km SW of

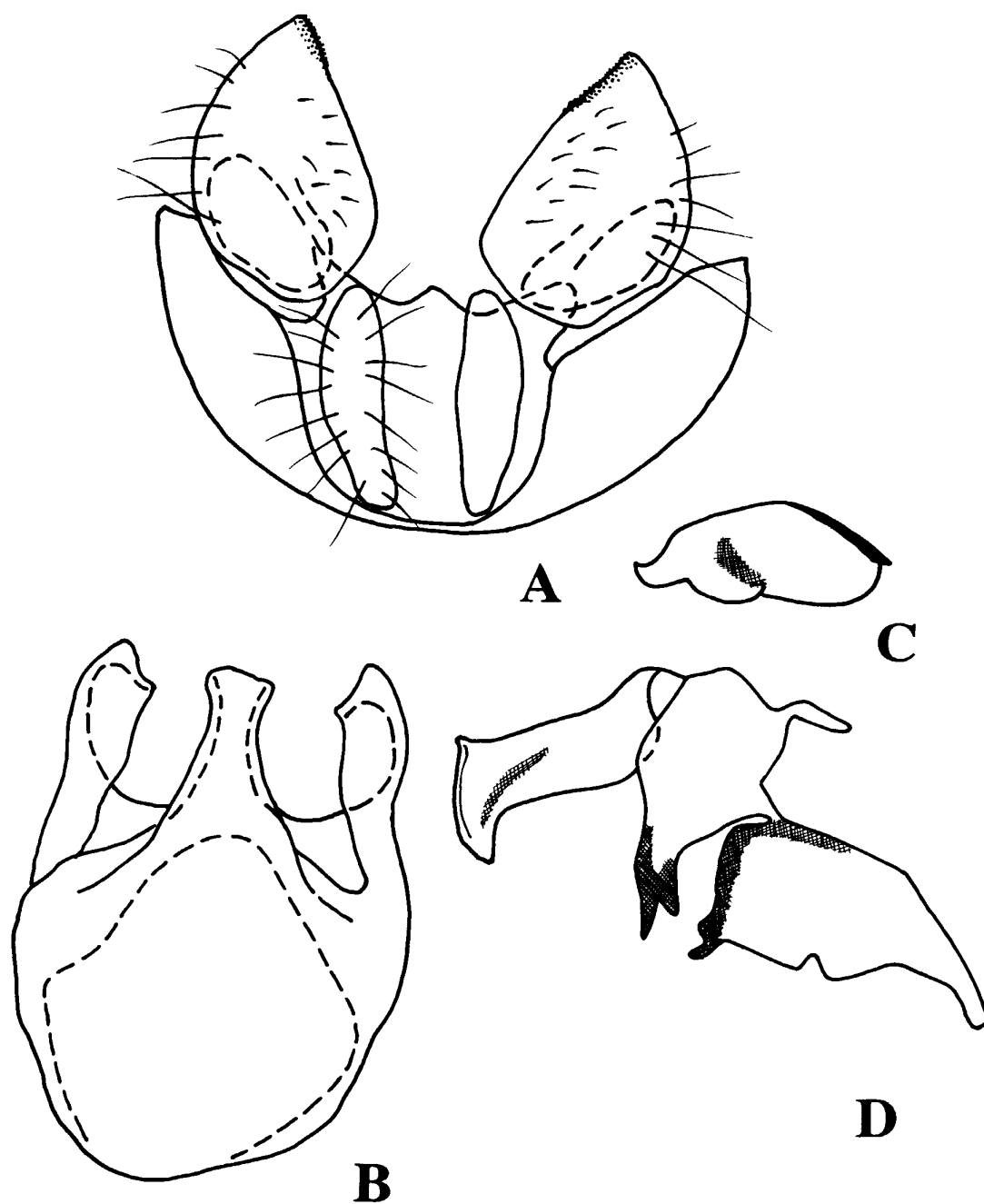


Fig. 5. *Syrphus annulifemur* Mutin, n. sp., genitalia of male: A. Anterior view of tergite IX; B. Posterior view of sternite IX; C. Lateral view of superior lobe; D. Lateral view of aedeagus.

Abaza, Barkalov, 27 May 1981; 5 females, Telestkoe Lake, Artybash, Levina, 31 May-9 June 1972; 1 female, Baikal, Barguzinskiy Reserve, Glushchenko, 1 July 1969; 1 female, Komsomolsk-na-Amure, Silinskii Park, Mutin, 5 June 1977; 3 females, 30 km N of Ternei, Mutin, 27 and 29 May 1982; 1 female, South Primorye, Livadiiskii Range, Krinichnaya Mountain, 1,000 m, Mutin, 19 June 1982; 1 female, Sakhalin, Holmskii District, Cape Slepikovskogo, Basarukin, 18-25 June 1990; 1 male, Kunashir, Alehino, Rikhter, 6 June 1968.

Diagnosis: Similar to *S. nitidifrons* Becker, 1921, but clearly differing in color of hind femur of female.

Description of male: Length of body 6.7-9.0 mm, length of wing 5.6-7.0 mm. Face yellow with gently sloped central knob in basal half, laterally covered with erect black hairs and light dusting. Epistoma narrowly black, genae dark brown. Frons and vertex shiny black, slightly dusted, with erect black hairs. Eye connection slightly less than length of vertex. Eyes bare. Antennae and arista dark brown, ventral part of second antennal segment oval and reddish yellow. Arista equal in length to antenna, and basal half strongly thickened. Mesonotum and pleurae shiny black with bluish reflection, finely dusted, covered with light yellow hairs. Scutellum yellow with black lateral corners, covered with primarily black hairs. Metasternum bare. Wings hyaline, completely covered with microtrichia. Thoracic squama with some weak hairs, sometimes almost bare. Legs primarily black; apical one-third of front and middle femora, top of hind femur, basal one-third of hind tibia, and front and middle surface of tibia and tarsi yellow. Ventral surface of middle metatarsus with black bristles. Abdomen elongate. Tergites II-IV with semilunular spots reaching their lateral margins. Posterior margin of tergite IV yellow. Genitalia yellow with black hairs. Genitalia, see Fig. 5.

Description of female: Length of body 8.5-9.5 mm, length of wing 7-8 mm. Face yellow with yellow or brown hairs. Frons and vertex shiny black with black hairs. Posterior part of frons with light grey or dusty golden band. Frons width less than one-half that of head at level of antenna base. Antennae red-brown, lower part yellow. Thoracic squama usually without hairs. Legs primarily yellow; basal one-fourth to one-fifth of femora, apical one-half of hind tibiae, and hind tarsi dorsally black. Hind femora with black ring in apical half, sometimes basal and apical black portions confluent. Upper apical side of hind femur with black hairs. Abdomen oval, each side lined in black. Tergites II-IV with narrow yellow spots reaching their lateral margins. Posterior margins of tergites IV-V yellow. Sternites with black band in middle. In other respects similar to male.

Etymology: This new species is named for the distinct banding of yellow pigmentation on the hind legs.

66. *Syrphus attenuatus* Hine, 1922 *

Distribution: Sakhalin; Holarctic.

Material examined: 4 males, 3 females, Sakhalin: 13 (Fig. 2); August.

67. *Syrphus ribesii* (Linnaeus, 1758)

References: Matsumura and Adachi 1917b: 36 (*S. kotoriensis* Matsumura); Violovitsh 1960a: 237, 1976a: 329, 1982: 190, 1983: 37; Kuwayama 1967: 117.

Distribution: Sakhalin, Kuril Islands; Holarctic.

Material examined: 90 males, 114 females, Sakhalin: 1, 7, 8, 11-14, 16, 17, Vtoraya Pady Station (Fig. 2); Kunashir: 1-5, 7, 8, 11, 16, 18-19 (Fig. 3); Iturup; Paramushir;

Sinushir; Starichkov; Shikotan; Urup; May-August.

68. *Syrphus sexmaculatus* (Zetterstedt, 1838) *

Distribution: Sakhalin; North Palaearctic.

Material examined: 1 male, Sakhalin: 13 (Fig. 2); August.

69. *Syrphus torvus* Osten-Sacken, 1875

References: Matsumura and Adachi 1917b: 28 (*S. topiarius* Meigen); Shiraki 1930: 357; Violovitsh 1960a: 237, 1976a: 329, 1982: 191, 1983: 37; Kuwayama 1967: 117.

Distribution: Sakhalin, Kuril Islands; Holarctic, Oriental Region.

Material examined: 36 males, 88 females, Sakhalin: 4, 5, 7, 9, 12-14, 16, 17, 20, Nevelsk Settlement, Nekrasovka Settlement (Fig. 2); Kunashir: 1, 8, 11, 17 (Fig. 3); Iturup; Cape Burevestnik; Ush; Yuriy; June-September.

70. *Syrphus vitripennis* Meigen, 1822

References: Violovitsh 1960a: 238, 1976a: 329, 1982: 191, 1983: 38; Kuwayama 1967: 117.

Distribution: Sakhalin, Kuril Islands; Holarctic, Oriental Region.

Material examined: 50 males, 62 females, Sakhalin: 8, 11, 13, 16, 17, Nekrasovka Settlement (Fig. 2); Kunashir: 11 (Fig. 3); Iturup; Kurilsk, Cape Burevestnik; Shikotan; Shpanberg; May-September.

71. *Syrphus dubius* Matsumura, 1918 *

Distribution: Sakhalin, Kunashir.

Material examined: 13 males, 12 females, Sakhalin: 7, 17 (Fig. 2); Kunashir: 5, 7, 18, 19 (Fig. 3); June-September.

Note: This little-known species was determined by us on the basis of Matsumura's (1918) brief original description. Here we give a diagnosis and a more complete description.

Diagnosis: Similar to *Syrphus vitripennis* Meigen, 1822, but differing in color of hind femora and frons (in *S. vitripennis* the frons near the base of the antenna is yellow without shiny black spots). Matsumura (1918) described some species that he thought were similar to *S. dubius*, but we have not seen the type specimens of any of them.

Description of male: Body length 10.8-11.5 mm. Face and genae yellow with light-colored hairs. Frons with dense golden dusting and black hairs, bare near base of antenna, shiny with two usually confluent black spots. Angle of frons slightly less than 110°. Vertex black with primarily black hairs. Length of frons 1.5 times longer than eye connection. Eyes bare. Antennae ventrally red-yellow, dorsally dark brown. Mesonotum mat, grey-green with yellow hairs. Scutellum yellow with primarily black hairs. Pleurae dark grey, finely reflective with light hairs. Anterior one-third to one-fourth of second cell (bp) without microtrichia, basal half of first basal cell (ba) bare. Thoracic squama with dense hairs. Legs primarily yellow; basal one-third of front and middle femora, apical two-thirds of hind tibiae, and hind tarsi black dorsally. Top of hind femora with black hairs. Tergite II of abdomen with yellow spots, tergites III-IV with yellow stripes, which broadly reach side margins. Sternites yellow with dark spots in middle of tergites II-III.

Description of female: Similar to male. Body length 9.0-12.0 mm. Head four times broader than frons at latter's narrowest part. Frons near antennae with bare black spot. Bands on abdomen narrower, but otherwise as in male.

72. *Xanthogramma laetum* (Fabricius, 1794) *

Synonymy: *Xanthogramma* (*Olbiosyrphus*) *eo*a Violo vitsh, 1975c: 102 (n. syn.); *X.* (*Olbiosyrphus*) *udege* Violo vitsh, 1975c: 103 (n. syn.)

References: Violo vitsh 1982: 194 (*Olbiosyrphus eo*a Violo vitsh).

Distribution: Sakhalin; Palaearctic.

Material examined: 1 male, Sakhalin: 17 (Fig. 2); July.

Note: We have studied the types of *Xanthogramma* (*Olbiosyrphus*) *eo*a Violo vitsh and *X.* (*Olbiosyrphus*) *udege* Violo vitsh, and as far as we can tell they are identical with European and Siberian specimens of *Xanthogramma laetum* (Fabricius). Violo vitsh used the presence or absence of yellow spots on the sternopleuron as the basis for diagnosing his species, but *X. laetum* shows variation in this character. No other characters are available to separate these species. *Xanthogramma laetum* is similar to *X. sapporens*e Matsumura, 1916, but differs from this species in having black bands on the abdominal sternites; in contrast, *X. sapporens*e has triangular or rounded dark spots on the sternites.

73. *Xanthogramma sapporens*e Matsumura, 1916

Synonymy: *Xanthogramma* (*Olbiosyrphus*) *sachalinica* Violo vitsh, 1975 (n. syn.)

References: Violo vitsh 1960a: 238, 1975c: 98, 104 [*X. (O.) sachalinica* Violo vitsh], 1976a: 331, 1982: 194 (*Olbiosyrphus*), 1983: 51 (*Olbiosyrphus*); Kuwayama, 1967: 117 (*Olbiosyrphus*).

Distribution: Sakhalin, Kunashir; Primorye?; Hokkaido, Honshu.

Material examined: 30 males, 23 females, Sakhalin: 7, 17, 18, 20, 21 (Fig. 2); Kunashir: 1, 11, 13, 18 (Fig. 3); May-August.

Note: We compared the holotype and paratypes of *X. (Olbiosyrphus) sachalinica* Violo vitsh with descriptions and specimens of *X. sapporens*e determined by A. A. Stackelberg and N. A. Violo vitsh and found them to be the same.

74. *Baccha maculata* Walker, 1852

References: Violo vitsh 1960a: 240, 1976a: 327 (*B. pulla* Violo vitsh, *B. eo*a Violo vitsh), 1976b: 141 (*B. eo*a), 1982: 186 (*B. eo*a, *B. pulla*), 1983: 27 (*B. eo*a, *B. pulla*); Hirashima 1989: 786.

Distribution: Sakhalin; Priamurye, Primorye; Korea; Hokkaido, Honshu, Shikoku, Kyushu, Tsushima, Gotô Archipelago; Oriental Region.

Material examined: 9 males, 10 females, Sakhalin: 7, 20, Bykovo-Mikho (Fig. 2); June-July.

75. *Baccha obscuripennis* Meigen, 1822

References: Violo vitsh 1960a: 240, 1976a: 327, 1982: 186.

Distribution: Sakhalin; Palaearctic.

Material examined: 3 males, 1 female, Sakhalin: 7, 17 (Fig. 2; identified by A. A. Stackelberg); June-August.

76. *Baccha sachalinica* Violo vitsh, 1976

References: Violo vitsh 1976b: 144, 1976a: 327 (*B. obscuripennis* Meigen), 1982: 186 (*B. obscuripennis* Meigen), 1983: 27; Peck 1988: 55.

Distribution: Sakhalin, Kunashir; Primorye, Priamurye.

Material examined: 3 males, Sakhalin: 17 (Fig. 2); Kunashir: 19 (Fig. 3); June-July.

77. *Chrysotoxum fasciatum* (Müller, 1764)

Distribution: Sakhalin; Palaearctic.

Material examined: 1 male, Sakhalin: 17 (Fig. 2); June.

78. *Chrysotoxum biguttatum* Matsumura, 1911

Synonymy: *Chrysotoxum subbicinctum* Violovitsh, 1956 (n. syn.).

References: Matsumura 1911: 73, Matsumura and Adachi 1916: 6; Violovitsh 1956a: 471 (*Chrysotoxum subbicinctum* Violovitsh), 1960a: 239 (*C. subbicinctum*), 1974b: 200 (*C. subbicinctum*), 1976a: 332 (*C. subbicinctum*), 1982: 195 (*C. subbicinctum*), 1983: 56 (*C. subbicinctum*); Kuwayama 1967: 117 (*C. subbicinctum*).

Distribution: Sakhalin, Iturup, Kunashir; Priamurye, Primorye.

Material examined: 21 males, 48 females, Sakhalin: 7, 17, 21 (Fig. 2); Kunashir: 1, 2, 5, 17-19 (Fig. 3); Iturup; June-August.

Note: A study of the description and original drawings of *C. biguttatum* (Matsumura 1911, 1916) showed that it is similar to *C. bicinctum* (Linnaeus) and *C. subbicinctum* Violovitsh, but not to *C. elegans* Loew as proposed by Shiraki (1930). *Chrysotoxum biguttatum* and *C. subbicinctum* were described from Sakhalin. *Chrysotoxum bicinctum* is common in the western part of the Palaearctic and extends eastwards only to Transbaikalia. This species has not been mentioned from the territory of the Far East. Common morphological characters and a similar geographic distribution support the conspecificity of *C. biguttatum* and *C. subbicinctum*.

79. *Chrysotoxum fasciolatum* (Degeer, 1776)

References: Matsumura 1911: 73 (*C. sachalinense* Matsumura), 1916: 252 (*C. sachalinense*); Shiraki 1930: 37; Violovitsh 1960a: 239, 1976a: 332, 1982: 195.

Distribution: Sakhalin; Holarctic.

Material examined: 3 males, 6 females, Sakhalin: 13, 17, Chapaev Settlement (Fig. 2); June-July.

80. *Chrysotoxum arcuatum* (Linnaeus, 1758)

References: Violovitsh 1982: 195 (*C. festivum* Linnaeus).

Distribution: Sakhalin; Palaearctic, Oriental Region.

Material examined: 7 females, Sakhalin: 17 (Fig. 2); July.

81. *Chrysotoxum grande* Matsumura, 1911

References: Matsumura 1911: 72, Matsumura and Adachi 1916: 7; Shiraki 1930: 29; Violovitsh 1960a: 239, 1974b: 198, 1976a: 332, 1982: 195, 1983: 55; Kuwayama 1967: 117.

Distribution: Sakhalin, Kunashir; Priamurye, Primorye; Korea; Hokkaido, Honshu, Shikoku, Kyushu, the Ryukyus.

Material examined: 2 males, 3 females, Sakhalin: 17, 18 (Fig. 2); Kunashir: 1 (Fig. 3); June-August.

82. *Melanostoma mellinum* (Linnaeus, 1758)

References: Matsumura and Adachi 1919: 136 (*M. ochiaianum* Matsumura, *M. sachalinense* Matsumura); Violovitsh 1960a: 231, 1976a: 328, 1982: 88; Peck 1988: 65.

Distribution: Sakhalin, Kuril Islands; Holarctic.

Material examined: 28 males, 69 females, Sakhalin: 5, 7, 9, 13, 14, 17-19 (Fig. 2); Kunashir: 15, 18-19, Otradnoe Settlement (Fig. 3); Iturup: Kurilsk; Urup; Paramushir; Severo-Kurilsk; June-August.

Note: *Melanostoma ochiaianum* Matsumura and *M. sachalinense* Matsumura were

placed as synonyms of *M. mellinum* by Peck (1988), but from the descriptions and drawings we think these two species are more like *M. scalare* (Fabricius). Resolution of this question, however, requires study of the type specimens.

83. ***Melanostoma orientale*** Wiedemann, 1824

References: Matsumura and Adachi 1919: 140 (*M. otaniense*); Violovitsh 1960a: 231, 1976a: 328, 1982: 188, 1983: 34; Peck 1988: 66; Hirashima 1989: 786.

Distribution: Sakhalin, Kunashir, Paramushir; Primorye; Hokkaido, Honshu, Shikoku, Kyushu, Ogasawara Islands; Oriental Region.

Material examined: 27 males, 36 females, Sakhalin: 7, 9, Anivskii District, Otradnoe Settlement (Fig. 2); Kunashir: 2, 5, 18, 19 (Fig. 3); Paramushir: Severo-Kurilsk; June-August.

Note: The taxonomy of the East Asian species of *Melanostoma* is not fully understood. The extent of variability in *M. mellinum*, *M. scalare*, and *M. orientale* is not known. In this article, we regard *M. orientale* as a species with trapezoidal transverse spots on tergites II-IV, and male genitalia similar to those of *M. scalare*.

84. ***Melanostoma scalare*** (Fabricius, 1794)

References: Violovitsh 1960a: 231, 1976a: 328, 1982: 188, 1983: 34; Kuwayama 1967: 115.

Distribution: Sakhalin, Kuril Islands; Palaearctic, Oriental Region, Afrotropical Region.

Material examined: 70 males, 49 females, Sakhalin: 9, 14, 18, Anivskii District (Fig. 2); Kunashir: 5, 8, 18-19, Otradnoe Settlement (Fig. 3); Iturup: Kurilsk; Paramushir: Severo-Kurilsk; Shikotan: Malo-Kurilsk; June-August.

85. ***Xanthandrus comtus*** (Harris, 1780)

References: Matsumura 1911: 78 (*Syrphus quadriguttulus* Matsumura); Violovitsh 1960a: 229; Peck 1988: 68.

Distribution: Sakhalin, Moneron; Palaearctic, Oriental Region.

Material examined: 2 males, 1 female, Sakhalin: 17, 21 Chapaev Settlement (Fig. 2); August.

86. ***Platycheirus (Pachysphyria) immaculatus*** Ôhara, 1980 *

Distribution: Sakhalin, Kunashir, Shikotan; Priamurye, Primorye; Honshu, Kyushu.

Material examined: 9 males, 20 females, Sakhalin: 14, Aniva Settlement, Vtoraya Pady (Fig. 2); Kunashir: 5, 8, 13, 18, 19 (Fig. 3); June-July.

87. ***Platycheirus (Platycheirus) albimanus*** (Fabricius, 1781)

References: Kuwayama 1967: 115; Skufjin 1992: 156.

Distribution: Paramushir, Kunashir?; Holarctic.

Note: We have not seen these specimens and did not find the species among our material. Another species, very similar to *P. albimanus* and very common in the Far East, is *P. urakawensis*, which was for a long time confused with *P. albimanus* and identified as such in almost all Russian collections.

88. ***Platycheirus (Platycheirus) angustatus*** (Zetterstedt, 1843)

Synonymy: *Melanostoma elongatum* Matsumura, 1919 (n. syn.).

References: Matsumura and Adachi 1919: 133 (*Melanostoma elongatum*); Violovitsh 1960a: 230, 1976a: 327, 1982: 187, 1983: 31; Skufjin 1992: 156.

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 33 males, 63 females, Sakhalin: 2, 7, 9, 13, 14, 17, 19, Aniva Settlement (Fig. 2); Kunashir: 3, 5, 13, 15, 18-19 (Fig. 3); June-August.

Note: We have studied the description and original drawing of *Melanostoma elongatum*, which was described by Matsumura (Matsumura and Adachi 1919) from Sakhalin, and have come to the conclusion that it is identical to the female of *P. angustatus* (Zetterstedt). This species has a very characteristic color and shape of the abdomen, which corresponds completely with the drawing of Matsumura.

89. *Platycheirus* (*Platycheirus*) *clypeatus* (Meigen, 1822)

References: Skufjin 1992: 156.

Distribution: Sakhalin, Iturup, Kunashir; Holarctic.

Material examined: 36 males, 115 females, Sakhalin: 7, 9, 12-14, 16-18, Aniva Settlement, Krilion (Fig. 2); Kunashir: 3, 4, 5, 17-19 (Fig. 3); Iturup: Kurilsk, Reidovoe; Paramushir: Severo-Kurilsk.

90. *Platycheirus* (*Platycheirus*) *discimanus* (Loew, 1871)

References: Violovitsh 1960a: 230, 1976a: 327, 1983: 30.

Distribution: Sakhalin; Holarctic.

Material examined: 17 males, 5 females, Sakhalin: 7, 17, Ilyinskoe Settlement (Fig. 2); May-August.

91. *Platycheirus* (*Platycheirus*) *dux* Violovitsh, 1957

References: Violovitsh 1957: 749 (*Platycheirus*), 1960a: 230, 1976a: 327, 1980e: 267, 1982: 187, 1983: 29; Kuwayama 1967: 115; Peck 1988: 70; Hirashima 1989: 787.

Distribution: Sakhalin, Kunashir; Primorye?; Hokkaido, Honshu, Shikoku.

Material examined: 5 males, 2 females, Kunashir: 11, 18 (Fig. 3); July-August.

92. *Platycheirus* (*Platycheirus*) *europaeus* Goeldlin, Maibach, and Speight, 1990 *

Distribution: Sakhalin; Palaearctic.

Material examined: 16 males, 15 females, Sakhalin: 7, 9, 12-14, 16, 17 (Fig. 2); June-August.

93. *Platycheirus* (*Platycheirus*) *immarginatus* (Zetterstedt, 1849)

References: Violovitsh 1983: 31; Peck 1988: 71; Skufjin 1992: 155.

Distribution: Sakhalin, Kuril Islands; Holarctic.

Material examined: 12 males, 13 females, Sakhalin: 7, 9, 12, 13 (Fig. 2); Kunashir: 18-19 (Fig. 3); Iturup: Kurilsk; Shumshu; July-August.

94. *Platycheirus* (*Platycheirus*) *peltatus* (Meigen, 1822)

References: Violovitsh 1960a: 230, 1976a: 328, 1982: 188, 1983: 32; Skufjin 1992: 156.

Distribution: Sakhalin, Kuril Islands?; Palaearctic.

Material examined: 5 males, 3 females, Sakhalin: 9, 13, 14, 17 (Fig. 2); June-July.

95. *Platycheirus* (*Platycheirus*) *perpallidus* (Verrall, 1901)

References: Violovitsh 1982: 188.

Distribution: Sakhalin, Kuril Islands; Holarctic.

Material examined: 30 males, 27 females, Sakhalin: 2, 9, 12-14 (Fig. 2); Kunashir: 18-19 (Fig. 3); Iturup: Kurilsk; Shumshu; June-August.

96. *Platycheirus* (*Platycheirus*) *podagratus* (Zetterstedt, 1838)

References: Skufjin 1992: 156.

Distribution: Sakhalin, Paramushir, Shumshu; Holarctic.

Material examined: 27 males, 23 females, Sakhalin: 7, 12-13 (Fig. 2); Paramushir: Severo-Kurilsk; Shumshu; June-August.

97. *Platycheirus* (*Platycheirus*) *scambus* (Staeger, 1843)

References: Violovitsh 1960a: 230, 1976a: 328, 1982: 188, 1983: 31; Skufjin 1992: 155.

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 28 males, 48 females, Sakhalin: 7, 9, 13, 14 (Fig. 2); Kunashir: 5, 18-19 (Fig. 3); June-August.

98. *Platycheirus* (*Platycheirus*) *scutatus* (Meigen, 1822)

References: Violovitsh 1982: 188, 1983: 32; Skufjin 1992: 156 (subspecies *P. scutatus orientalis* Skufjin).

Distribution: Sakhalin, Paramushir, Kunashir; Holarctic.

Material examined: 3 males, Sakhalin: 7 (Fig. 2); Paramushir: Severo-Kurilsk.

99. *Platycheirus* (*Platycheirus*) *sticticus* (Meigen, 1822)

References: Skufjin 1992: 156.

Distribution: Sakhalin; Palaearctic.

Material examined: 1 male, Sakhalin: 17 (Fig. 2); June.

100. *Platycheirus* (*Platycheirus*) *urakawensis* (Matsumura, 1919)

References: Violovitsh 1960a: 229 (*P. albimanus* Fallén), 1982: 187 (*P. albimanus*), 1983: 32 (*P. albimanus*); Kuwayama 1967: 115; Skufjin 1992: 156; Hirashima 1989: 787.

Distribution: Sakhalin, Kuril Islands; Pribaikalye, Priamurye, Primorye, Kamchatka; Hokkaido, Shikoku; North America.

Material examined: 10 males, 22 females, Sakhalin: 5, 17, 18 (Fig. 2); Kunashir: 5, 13, 17, 19 (Fig. 3); Iturup; Paramushir: Severo-Kurilsk; Shikotan: Malo-Kurilsk; May-August.

101. *Pyrophaena granditarsis* (Forster, 1771)

References: Violovitsh 1960a: 229, 1976a: 327, 1982: 186, 1983: 28; Kuwayama 1967: 115.

Distribution: Sakhalin, Zelionyi, Kunashir?; Holarctic.

Material examined: 4 males, 6 females, Sakhalin: 7, 17, 18 (Fig. 2); Zelionyi; July-August.

102. *Pyrophaena rosarum* (Fabricius, 1787)

References: Violovitsh 1960a: 229, 1976a: 327, 1982: 187; Kuwayama 1967: 115.

Distribution: Sakhalin, Kuril Islands; Holarctic.

Material examined: 14 males, 12 females, Sakhalin: 13, 18 (Fig. 2), Bykovo Settlement; Kunashir: 3, 11, 19 (Fig. 3); Zelionyi, Yurii; July-September.

103. *Paragus* (*Pandasyophthalmus*) *haemorrhous* Meigen, 1822

References: Matsumura and Adachi 1916: 11 (*P. pallipes* Matsumura); Shiraki 1930: 248; Violovitsh 1960a: 229 (*P. tibialis*), 1976a: 327 (*P. tibialis*), 1982: 186 (*P. tibialis*), 1983: 26 (*P. tibialis*); Kuwayama 1967: 115 (*P. tibialis*).

Distribution: Sakhalin, Kunashir; Holarctic, Oriental Region.

Material examined: 20 males, 9 females, Sakhalin: 7, 17, 18, Sokol Settlement (Fig. 2); Kunashir: 4, 5, 17, 19, Lake Peschanoe (Fig. 3); Iturup; Kurilsk; June-August.

Note: Study of a large amount of material from the Far East has shown that *P. tibialis*

is absent from Sakhalin and the Kuril Islands, Priamurye, Primorye, and the northern Japanese Islands, and has only been found in the Ryukyus and in southern China.

104. *Neocnemodon vitripennis* (Meigen, 1822)

References: Violovitsh 1960a: 222 (*Cnemodon dreyfusiae* Delucchi and Pschorn-Walcher), 1976a: 334, 1982: 199, 1983: 13; Mutin 1988: 131.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 4 males, 5 females, Sakhalin: 7, 14, 17 (Fig. 2); Kunashir: 5 (Fig. 3); May-June.

105. *Pipiza austriaca* Meigen, 1822

References: Violovitsh 1988: 117 (subspecies *P. austriaca nigricans* Violovitsh).

Distribution: Sakhalin; Palaearctic.

Material examined: 1 male, 6 females, Sakhalin: 14, 17, 15 km NW of Aniva (Fig. 2); June.

106. *Pipiza bimaculata* Meigen, 1822 *

Synonymy: *Neocnemodon nox* Violovitsh, 1978 (n. syn.); *Pipiza sachalinica* Violovitsh, 1988 (n. syn.)

References: Violovitsh 1978b: 179 (*Neocnemodon nox* Violovitsh), 1988: 123 (*Pipiza sachalinica* Violovitsh); Mutin, 1988: 131 (*Pipiza nox* Violovitsh).

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 25 males, 12 females, Sakhalin: 7, 14, 17, Chapaevo Settlement (Fig. 2); Kunashir: 5, 19 (Fig. 3); June-July.

Note: Study of the type specimens of *Neocnemodon nox* Violovitsh, 1978, and *Pipiza sachalinica* Violovitsh, 1988, has shown them to be identical with European material of *Pipiza bimaculata* Meigen, 1822, as determined by T. Nielsen (Norway) and L. V. Zimina (Moscow Region).

107. *Pipiza festiva* Meigen, 1822

References: Violovitsh 1983: 65; Peck 1988: 86.

Distribution: Sakhalin; Palaearctic.

Note: We have not found this species in our material.

108. *Pipiza lugubris* (Fabricius, 1775)

References: Violovitsh 1960a: 221, 1976a: 334, 1982: 199, 1983: 66; Kuwayama 1967: 112.

Distribution: Sakhalin, Kunashir, Shikotan; Palaearctic.

Material examined: 1 male, Sakhalin; June.

109. *Pipiza quadrimaculata* (Panzer, 1802)

Synonymy: *Pipiza insolata* Violovitsh, 1985 (n. syn.)

References: Violovitsh 1960a: 221, 1976a: 334, 1982: 199, 1983: 55, 1985: 207 (*P. insolata* Violovitsh), 1988: 118 (*P. insolata*).

Distribution: Sakhalin; Holarctic.

Material examined: 78 males, 9 females, Sakhalin: 7, 14, 17 (Fig. 2); June.

Note: In comparing material of *P. quadrimaculata* from Europe, the Khabarovsk Territory, and Sakhalin with the type specimens of *P. insolata*, we found no significant differences. The distinctions cited by Violovitsh (1985) in his description of *P. insolata* (shape of vertex and male genitalia) lie within the limits of morphological variation shown by *P. quadrimaculata*.

110. *Triglyphus aureus* Violovitsh, 1981**References:** Violovitsh 1980a: 43, 1982: 198, 1983: 73.**Distribution:** Kunashir; Primorye.**Material examined:** 1 male, Kunashir: 11 (Fig. 3); August.111. *Triglyphus primus* Loew, 1840**References:** Violovitsh 1960a: 222, 1982: 198: 73; Kuwayama 1967: 112; Peck 1988: 93, 110.**Distribution:** Sakhalin, Moneron, Kunashir; Palaearctic.**Material examined:** 20 males, 2 females, Sakhalin: 7, 14, 20 (Fig. 2); Kunashir: 4, 5, 11, 12, 18-19 (Fig. 3); Moneron; June-August.112. *Chamaesyrrhus scaevoides* (Fallén, 1817) ***Distribution:** Sakhalin; Palaearctic.**Material examined:** 2 males, Sakhalin: Okhinskii District, Berezovka River; Korsakovskii District, Utesnoe Settlement; July-September.113. *Cheilosia* (*Cheilosia*) *annulifemur* (Stackelberg, 1930)**References:** Barkalov, in Violovitsh 1983: 79.**Distribution:** Sakhalin, Kunashir, Shikotan; mountains of South Siberia, Far East.**Material examined:** 4 males, 7 females, Sakhalin: 14, 17 (Fig. 2); Kunashir: 1, 5, 13, 16, 19 (Fig. 3); Iturup; Kurilsk; Shikotan; June-August.114. *Cheilosia* (*Cheilosia*) *aterrima* (Sack, 1927)**References:** Barkalov, in Violovitsh 1983: 77; Hirashima 1989: 788.**Distribution:** Kunashir; Japanese Archipelago; Oriental Region.**Material examined:** 1 male, Kunashir: 1 (Fig. 3); August.115. *Cheilosia* (*Cheilosia*) *chipsanii* Matsumura, 1911**References:** Shiraki 1930: 285; Violovitsh 1982: 202; Hirashima 1989: 788.**Distribution:** Sakhalin; Hokkaido.**Note:** This species, not present in our material, was noted by Violovitsh (1982) probably on the basis of Shiraki's (1930) work.116. *Cheilosia* (*Cheilosia*) *diminuta* Shiraki, 1930**References:** Shiraki 1930: 311; Violovitsh 1960a: 223, 1976: 336, 1982: 202.**Distribution:** Sakhalin.**Note:** We have not found specimens that correspond with Shiraki's (1930) description of this species; Violovitsh noted it on the basis of published records.117. *Cheilosia* (*Cheilosia*) *eurodes* Shiraki, 1930**References:** Shiraki 1930: 276; Violovitsh 1960a: 223 (*C. melancholica* Violovitsh), 1976a: 336, 336 (*C. melancholica*), 1982: 202 (*C. melancholica*); Barkalov, in Violovitsh 1983: 78, Barkalov, 1981a: 418 (*C. melancholica*).**Distribution:** Sakhalin, Kunashir.**Material examined:** 73 males, 35 females, Sakhalin: 5, 14, 17, Ozerskoe, 65 km from Cape Terpeniya (Fig. 2); Kunashir: 11 (Fig. 3); July-August.118. *Cheilosia* (*Cheilosia*) *gigantea* (Zetterstedt, 1838)**References:** Violovitsh 1982; Barkalov, in Violovitsh 1983: 84.**Distribution:** Sakhalin?, Paramushir; Palaearctic.**Material examined:** 1 male, Paramushir; June.

119. *Cheilosia* (*Cheilosia*) *impressa* Loew, 1840

References: Shiraki 1930: 301 (as subspecies *C. impressa kusunai* Matsumura); Violovitsh 1960a: 224, 1976a: 336, 1982: 202; Barkalov, in Violovitsh 1983: 84.

Distribution: Sakhalin, Kunashir, Iturup; Palaearctic.

Material examined: 263 males, 162 females, Sakhalin: 5, 9, 14, 15, 17, 18, Aniva (Fig. 2); Kunashir: 1, 5, 11, 16-19 Goryachiy Plyazh, Vodopadynoe, Cape Paltusova (Fig. 3).

120. *Cheilosia* (*Cheilosia*) *iwawakiensis* (Shiraki, 1930)

References: Barkalov 1983: 84; Hirashima 1989: 788.

Distribution: Sakhalin, Kuril Islands; Honshu.

Note: We are not completely sure of the correct identification of this species; a full elucidation of the taxonomy requires examination of the type specimens.

121. *Cheilosia* (*Cheilosia*) *japonica* (Hervé-Bazin, 1914)

References: Violovitsh 1960a: 223 (*C. canicularis japonica* Shiraki), 1976: 335 (*C. canicularis* Panzer); Kuwayama 1967: 113 (*C. canicularis*); Barkalov, in Violovitsh 1983: 80; Hirashima 1989: 788.

Distribution: Sakhalin, Kunashir, Moneron; Hokkaido, Honshu.

Material examined: 224 males, 332 females, Sakhalin: 5, 7, 9, 10, 14, 20, Novikovo (Fig. 2); Kunashir: 1, 5, 11, 13, 16-19, Goryachiy Plyazh (Fig. 3); Moneron; April-August.

122. *Cheilosia* (*Cartosyrphus*) *josankeiana* Shiraki, 1930

References: Violovitsh 1956a: 467 (*C. plumuliseta*), 1960a: 225 (*C. plumuliseta*), 1976a: 336 (*C. plumuliseta*), 1982: 202 (*C. plumuliseta*); Kuwayama 1967: 113; Barkalov, in Violovitsh 1983: 75; Hirashima 1989: 788.

Distribution: Sakhalin, Kunashir; Primorye; Hokkaido, Shikoku, Kyushu.

Material examined: 26 males, 4 females, Sakhalin: 17, 18 (Fig. 2); Kunashir: 1, 11, 13, 19 (Fig. 3); July-August.

123. *Cheilosia* (*Cartosyrphus*) *kunashirica* (Violovitsh, 1956)

References: Violovitsh 1956a: 467 (*Chilosia*), 1960a: 224, 1976a: 336, 1982: 202; Kuwayama 1967: 113; Barkalov, in Violovitsh 1983: 75.

Distribution: Sakhalin, Kunashir.

Material examined: 48 males, 26 females, Sakhalin: 5, 7, 14, 17, 18, Chapaev Settlement (Fig. 2); Kunashir: 1, 5, 11, 19, Goryachiy Plyazh (Fig. 3).

124. *Cheilosia* (*Cartosyrphus*) *latifasciella* (Shiraki, 1930)

References: Barkalov 1993b: 123; Hirashima 1989: 788.

Distribution: Kunashir, Shikotan; Hokkaido, Kyushu.

Material examined: 4 males, Kunashir: 5, 13, 19 (Fig. 3); June-July.

125. *Cheilosia* (*Cheilosia*) *longiptera* Shiraki, 1968

References: Barkalov, in Violovitsh 1983: 81; Hirashima 1989: 788.

Distribution: Kunashir, Shikotan; Honshu; Korea.

126. *Cheilosia* (*Cartosyrphus*) *longula* (Zetterstedt, 1838)

References: Violovitsh 1960a: 224, 1976a: 202, 1982: 202; Kuwayama 1967: 113; Barkalov, in Violovitsh 1983: 75.

Distribution: Sakhalin, Iturup, Kunashir; Palaearctic.

Material examined: 18 males, 19 females, Sakhalin: 4, 5, 13, 14, 17, Kolendo, Nevelsk, Chapaevo Settlement (Fig. 2); Kunashir: 5, Goryachiy Plyazh (Fig. 3); Iturup.

127. *Cheilosia* (*Cheilosia*) *matsumurana* (Shiraki, 1930)

References: Violovitsh 1960a: 224, 1971: 109 (*C. moneronica*), 1976a: 336; 1982: 202; Barkalov, in Violovitsh 1983: 74, 75 (*C. moneronica*), Barkalov 1993a: 36; Hirashima 1989: 788.

Distribution: Sakhalin?, Kunashir, Moneron; South Primorye; Hokkaido, Honshu, Shikoku, Kyushu.

Material examined: 16 males, 24 females, Kunashir: 1, 5, 11, 16, 19 (Fig. 3); Moneron; June-August.

128. *Cheilosia* (*Cheilosia*) *motodomariensis* Matsumura, 1916

References: Shiraki 1930: 274, 1968: 92 (*C. illustrata* Harris); Violovitsh 1960a: 224, 1976a: 336 (*C. illustrata motodomariensis*), 336 (*C. subillustrata*), 1982: 202 (*C. illustrata motodomariensis*), 203 (*C. subillustrata*); Kuwayama 1967: 113 (*C. illustrata motodomariensis*); Barkalov, in Violovitsh 1983: 73, Barkalov 1981a: 419, 1981b: 114.

Distribution: Sakhalin, Kuril Islands; eastern part of Palaearctic.

Material examined: 134 males, 93 females, Sakhalin: 7, 13-16, 17, 18, 20 (Fig. 2); Kunashir: 1, 5, 10, 11, 19 (Fig. 3); Iturup: Kurilsk; Paramushir: Severo-Kurilsk; Urup; June-August.

129. *Cheilosia* (*Cheilosia*) *nikkoensis* Shiraki, 1930

References: Violovitsh 1960a: 225, 1976a: 336, 1982: 203; Kuwayama 1967: 113; Barkalov, in Violovitsh 1983: 83.

Distribution: Sakhalin, Kunashir, Shikotan; Honshu.

Material examined: 15 males, 15 females, Sakhalin: 5, 7 (Fig. 2); Kunashir: 1, 2, 5, 29, 11, 15, 16, 19, Goryachiy Plyazh, Cape Paltusova (Fig. 3); June-August.

130. *Cheilosia* (*Cartosyrphus*) *nox* Stackelberg, 1952 *

Distribution: Sakhalin, Kunashir; Primorye; Mongolia.

Material examined: 3 males, 13 females, Sakhalin: 19-21 (Fig. 2); Kunashir: 11, 19-20 (Fig. 3); June-August.

131. *Cheilosia* (*Cheilosia*) *ochripes* (Shiraki, 1930)

References: Shiraki 1930: 292; Violovitsh 1960a: 225, 1976a: 336, 1982: 203; Hirashima 1989: 789.

Distribution: Sakhalin, Kunashir?; Hokkaido, Honshu, Kyushu.

Note: This species is not present among our material. All the specimens identified as *C. ochripes* by Violovitsh appear to belong to *C. japonica* Hervé-Bazin.

132. *Cheilosia* (*Cheilosia*) *pagana* (Meigen, 1822)

References: Violovitsh 1960a: 225, 1976a: 336, 1982: 203; Kuwayama 1967: 113; Barkalov, in Violovitsh 1983: 75.

Distribution: Sakhalin, Kuril Islands; Holarctic.

Material examined: 101 males, 93 females, Sakhalin: 5, 7, 9, 12, 14, 17, 20, Firsovo Settlement (Fig. 2); Kunashir: 5, 8, 11, 16-19, Dubovoe (Fig. 3); Iturup: Kurilsk; Zelionyi; Urup; Yuriy; April-September.

133. *Cheilosia* (*Cartosyrphus*) *pallipes* Loew, 1863

References: Violovitsh 1960a: 223 [*C. flavissima* (Becker)], 1976a: 336, 1982: 203;

Kuwayama 1967: 113 (*C. flavissima*).

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 105 males, 51 female, Sakhalin: 5, 7, 17; Kunashir: 5, 17, 19; June-August.

134. *Cheilosia* (*Cartosyrphus*) *scutellata* (Fallén, 1817)

References: Matsumura 1911: 80 (*C. scutellaris* Matsumura); Shiraki 1930: 306; Violovitsh 1960a: 226, 1976a: 336, 1982: 203.

Distribution: Sakhalin; Palaearctic.

Material examined: 6 males, 2 females, Sakhalin: 5 (Fig. 2); Kunashir: 5 (Fig. 3); July-August.

135. *Cheilosia* (*Cheilosia*) *sichotana* (Stackelberg, 1930)

References: Barkalov, in Violovitsh 1983: 80.

Distribution: Sakhalin, Kunashir; from Altai to Far East.

Material examined: 16 males, 80 females, Sakhalin: 17 (Fig. 2); Kunashir: 11, 16 (Fig. 3); May-July.

136. *Cheilosia* (*Cheilosia*) *subalbipila* (Violovitsh, 1956)

References: Violovitsh 1956: 466, 1960a: 226, 1976a: 336, 1982: 203; Barkalov, in Violovitsh 1983: 79.

Distribution: Sakhalin.

Material examined: 11 males, 9 females, Sakhalin: 5, 17 (Fig. 2); May-June.

137. *Cheilosia* (*Cheilosia*) *urakawensis* (Shiraki, 1930)

References: Shiraki 1930: 287; Violovitsh 1960a: 226, 1976a: 337, 1982: 204; Kuwayama 1967: 113; Barkalov, in Violovitsh 1983: 83.

Distribution: Sakhalin, Kunashir; Hokkaido.

Material examined: 92 males, 57 females, Sakhalin: 5, 9, 17, Nevelsk Settlement, Shibunino (Fig. 2); Kunashir: 1, 5, 9, 11, 13, 16-19 (Fig. 3); Iturup; July-September.

138. *Cheilosia* (*Cheilosia*) *velutina* Loew, 1840

References: Barkalov, in Violovitsh 1983: 84.

Distribution: Sakhalin; Palaearctic.

Material examined: 53 males, 20 females, Sakhalin: 5, 7, 14, 17, Chapaevo (Fig. 2); June-August.

139. *Cheilosia* (*Cheilosia*) *yesonica* Matsumura, 1905

References: Shiraki 1930: 289; Violovitsh 1960a: 226, 1976a: 337, 1982: 204; Kuwayama 1967: 114; Barkalov, in Violovitsh 1983: 83.

Distribution: Sakhalin, Kunashir, Shikotan; Hokkaido.

Material examined: 31 males, 11 females, Sakhalin: 17 (Fig. 2); Kunashir: 16 (Fig. 3); June.

140. *Cheilosia* (*Cheilosia*) sp. A

Distribution: Kunashir.

Material examined: 9 males, 19 females, Kunashir: 1, 5, 11, 16, 19 (Fig. 3).

141. *Cheilosia* (*Cheilosia*) sp. B

Material examined: 13 males, 29 females, Sakhalin: 10, 17 (Fig. 2); Kunashir: 1, 11, 16, Vodopadnoe, Goryachee Plyazh (Fig. 3); July-August.

142. *Cheilosia (Endoiasimyia) formosana* (Shiraki, 1930)

References: Shiraki 1932: 95; Violovitsh 1960a: 226, 1976: 337, 1982: 204 (as genus *Endoiasimyia*); Barkalov, in Violovitsh 1983: 78; Peck 1988: 122.

Distribution: Sakhalin, Kunashir; Taiwan.

Material examined: 7 males, 7 females, Sakhalin: 1, 18 (Fig. 2); Kunashir: 1, 11 (Fig. 3).

143. *Rhingia laevigata* Loew, 1858

References: Violovitsh 1960a: 228, 1976a: 333, 1982: 195, 1983: 98; Kuwayama 1967: 115.

Distribution: Sakhalin, Kunashir, Shikotan; Priamurye, Primorye; Hokkaido, Honshu, Shikoku.

Material examined: 83 males, 120 females, Sakhalin: 5, 7, 14, 17, Kirilovo Settlement, Sokol Settlement (Fig. 2); Kunashir: 1, 2, 5, 11, 12, 16, 17-19, Vodopadnoe (Fig. 3); June-August.

144. *Callicera aenea* (Fabricius, 1781)

References: Violovitsh 1976a: 337, 1982: 205, 1983: 89; Peck 1988: 126.

Distribution: Sakhalin; Palaearctic, Taiwan.

145. *Graptomyza takeuchii* Shiraki, 1954

References: Violovitsh 1955: 357 (*Graptomyza eoa* Violovitsh), 1960a: 241 (*G. eoa*), 1976a: 337, 1982: 205, 1983: 111; Kuwayama 1967: 118 (*G. eoa*); Peck 1988: 127; Hirashima 1989: 789.

Distribution: Kunashir; Kyushu.

Material examined: 10 males, 16 females, Kunashir: 2, 4, 11, 18-19 (Fig. 3); July.

Note: This species is characterized by extensive variation in the dark spots on tergites and wings. The intensity of black color on the legs is also variable, but in all the specimens studied, males have the front tarsi darker than the females. These features were used by Shiraki (1968) in the differentiation of his species: *G. takeuchii*, *G. itoi*, *G. ishikawai*, and *G. okawai*. The taxonomy of these species requires thorough revision.

146. *Volucella bombylans* (Linnaeus, 1758)

References: Violovitsh 1960a: 240, 1976a: 337, 1982: 205, 1983: 109.

Distribution: Sakhalin, Kuril Islands; Holarctic.

Material examined: 8 males, 2 females, Sakhalin: 13, 15, 17 (Fig. 2); Kunashir: 5 (Fig. 3); Paramushir; July.

147. *Volucella inanis* (Linnaeus, 1758)

References: Violovitsh 1960a: 240, 1976a: 337, 1982: 205, 1983: 109.

Distribution: Sakhalin, Kuril Islands?; Palaearctic.

Material examined: 3 males, 4 females, Sakhalin: 7, 17 (Fig. 2); July-August.

148. *Volucella jeddona* Bigot, 1875

References: Violovitsh 1960a: 241, 1976a: 337, 1982: 205, 1983: 109; Kuwayama 1967: 118.

Distribution: Sakhalin, Kunashir, Shikotan; Primorye; Mongolia; Hokkaido, Honshu.

Material examined: 83 males, 72 females, Sakhalin: 7, 9, 14, 18, 20, 21, Chapaev Settlement, Cape Krilion (Fig. 2); Kunashir: 1, 5, 11, 17, 19, Cape Paltusova (Fig. 3); July-August.

149. *Volucella pellucens* (Linnaeus, 1758)

References: Violovitsh 1960a: 241 (*V. pellucens tabanoides* Motschulsky), 1976a: 337 (*V. tabanoides*), 1982: 205 (*V. pellucens tabanoides*), 1983: 110; Kuwayama 1967: 118; Peck 1988: 131.

Distribution: Sakhalin, Kunashir, Iturup, Shikotan; Palaearctic, Oriental Region.

Material examined: 27 males, 63 females, Sakhalin: 2, 5, 7, 9, 14, 17, 20, Chapaevo (Fig. 2); Kunashir: 1, 3, 11, 16, 19 (Fig. 3); Shikotan; July-September.

150. *Brachyopa maritima* Violovitsh, 1980

References: Violovitsh 1980d: 125, 1983: 99.

Distribution: Kunashir, Iturup; Primorye.

Material examined: 1 male, 1 female, Kunashir: 19 (Fig. 3); July.

151. *Brachyopa vittata* Zetterstedt, 1843

References: Violovitsh 1983: 99.

Distribution: Kunashir?; Palaearctic.

152. *Chrysogaster pollinifacies* Violovitsh, 1956

References: Violovitsh 1956a: 462, 1960a: 223, 1976a: 335, 1982: 201, 1983: 89.

Distribution: Sakhalin, Kunashir.

Material examined: 33 males, 13 females, Sakhalin: 3, 5, 14, 20 (Fig. 2); Kunashir: 5, 19 (Fig. 3); June-August.

153. *Chrysosyrphus niger* (Zetterstedt, 1843) *

Distribution: Sakhalin; Palaearctic.

Material examined: 18 females, Sakhalin: 12, 13 (Fig. 2); July-August.

154. *Orthonevra elegans* (Meigen, 1822)

References: Violovitsh 1960a: 222, 1976a: 335, 1982: 200; Kuwayama 1967: 113.

Distribution: Sakhalin, Kunashir, Iturup; Palaearctic.

Material examined: 44 males, 27 females, Sakhalin: 14, 17, 18, 20, Leonidovo Settlement (Fig. 2); Kunashir: 1, 4, 5, 11, 18-19 (Fig. 3); June-July.

155. *Orthonevra sachalinensis* (Violovitsh, 1956)

References: Violovitsh 1956: 464 (*Orthoneura*), 1960a: 222, 1976a: 335, 1979a: 50, 1982: 201, 1983: 92.

Distribution: Sakhalin.

Material examined: 4 males, 1 female, Sakhalin: 14, Novinskoe Settlement, Mikho-Bykovo (Fig. 2); June-July.

156. *Orthonevra stackelbergi* Thompson and Torp, 1982 *

References: Violovitsh 1960a: 222 (*Orthoneura intermedia* Lundb.), 1979a: 53 (*O. intermedia*), 1982: 200 (*O. intermedia*), 1983: 92 (*O. intermedia*).

Distribution: Sakhalin; Palaearctic.

Material examined: 6 males, 2 females, Sakhalin: 17, Smirnakh Settlement (Fig. 2); July-August.

157. *Neoascia (Neoascia) longiscutata* (Shiraki, 1930)

References: Stackelberg 1955a: 345; Violovitsh 1960a: 227, 1976a: 333, 1982: 196, 1983: 107; Kuwayama 1967: 114.

Distribution: Sakhalin, Kunashir, Hokkaido.

Material examined: 7 males, 11 females, Sakhalin: 14, 20 (Fig. 2); Kunashir: 6, 18-19

(Fig. 3); June-July.

158. *Neoascia (Neoascia) tenur* (Harris, 1780)

References: Violovitsh 1960a: 227 (*N. dispar* Meigen), 1976a: 333 (*N. dispar*), 1982: 196 (*N. dispar*), 1983: 107 (*N. dispar*); Kuwayama 1967: 114 (*N. dispar*).

Distribution: 83 males, 96 females, Sakhalin: 12-14, 17, 18, Shibunino Settlement (Fig. 2); Kunashir: 2, 5, 6, 18-19 (Fig. 3); June-July.

159. *Neoascia (Neoasciella) geniculata* Meigen, 1822

Synonymy: *Neoascia geniculata orientalis* Violovitsh, 1957 (n. syn.)

References: Violovitsh 1960a: 227, 1976a: 333, 1982: 196.

Material examined: 10 males, 30 females, Sakhalin: 12, 13, 15 (Fig. 2); June-August.

Note: From our study of a great deal of material of this species from different parts of the Far East, we conclude that specimens with a completely black abdomen, which were separated by Violovitsh (1957) as a subspecies, occur throughout the eastern part of the Palaearctic region. Such specimens fly at the same time as specimens with a light band on the abdomen. In the absence of any other character to separate Violovitsh's subspecies, we consider *N. geniculata orientalis* Violovitsh to be a synonym of *N. geniculata*.

160. *Neoascia (Neoasciella) tuberculifera* Violovitsh, 1957

References: Violovitsh 1957: 748, 1960a: 227, 1976a: 333, 1982: 197, 1983: 107; Stackelberg 1965: 914; Peck 1988: 144.

Distribution: Sakhalin; Primorye.

Material examined: 1 male, 3 females, Sakhalin: 17 (Fig. 2); June.

161. *Sphegina (Asiosphegina) elongata* Shiraki and Edashige, 1953, n. comb. *

Distribution: Kunashir; Japan.

Material examined: 2 males, Kunashir: 17, 18 (Fig. 3); August.

Note: This species is similar to *S. grunini* Stackelberg and *S. freyana* Stackelberg, from which the male differs in genitalia morphology and in the broader and shorter tooth-like process on sternite IV. We know of no references to this species from the study area and therefore cite these records as new for the Kuril Islands.

162. *Sphegina (Asiosphegina) freyana* Stackelberg, 1956

References: Stackelberg 1956a: 707, 1956b: 935; Violovitsh 1960a: 227, 1976a: 333, 1980c: 116, 1982: 197, 1983: 105; Kuwayama 1967: 114; Peck 1988: 146.

Distribution: Sakhalin, Kunashir.

Material examined: 7 males, Sakhalin: Novikovo Settlement; Kunashir: 11, 17; July.

163. *Sphegina (Asiosphegina) hennigiana* Stackelberg, 1956

References: Stackelberg 1956a: 707, 1956b: 936; Violovitsh 1960a: 227, 1976a: 333, 1980c: 115, 1982: 197, 1983: 104; Kuwayama 1967: 114; Peck 1988: 146.

Distribution: Sakhalin, Kunashir.

Material examined: 4 males, 2 females, Sakhalin: 7 (Fig. 2); Kunashir: 11 (Fig. 3); June-July.

164. *Sphegina (Asiosphegina) japonica* Shiraki and Edashige, 1953

References: Stackelberg 1956a: 707, 1956b: 938 (*S. macrocerca* Stackelberg); Violovitsh 1960a: 228 (*S. macrocerca*), 1976a: 33, 1980c: 117 (*S. macrocerca*), 1982: 197, 1983: 105 (*S. japonica*, *S. macrocerca*); Kuwayama 1967: 114 (*S. macrocerca*);

Peck 1988: 146; Hirashima 1989: 790.

Distribution: Sakhalin, Kunashir; Primorye, Honshu, Shikoku, Kyushu.

Material examined: 1 male, 4 females, Sakhalin: 17 (Fig. 2); Kunashir: 17, Vodopadnoe (Fig. 3); July.

165. *Sphegina (Asiosphegina) nitidifrons* Stackelberg, 1956

References: Stackelberg 1956a: 707, 1956b: 937; Violovitsh 1960a: 228, 1976a: 333, 1980c: 117, 1982: 197, 1983: 105; Kuwayama 1967: 114; Peck 1988: 146; Hirashima 1989: 790.

Distribution: Sakhalin, Kunashir; Honshu, Kyushu.

Material examined: 11 male, 6 females, Sakhalin: 17, Bykovo Station, Mikhovo Settlement (Fig. 2); Kunashir: 5, 11, 19 (Fig. 3); July-August.

166. *Sphegina (Sphegina) claviventris* Stackelberg, 1956

References: Stackelberg 1956a: 710, 1956b: 942; Violovitsh 1960a: 228, 1976a: 333, 1980c: 112, 1982: 197, 1983: 103; Peck 1988: 147.

Distribution: Sakhalin; southern Siberia, Primorye.

Material examined: 1 male, Sakhalin: 17 (Fig. 2).

167. *Sphegina (Sphegina) melancholica* Stackelberg, 1956

References: Stackelberg 1956a: 708, 1956b: 939; Violovitsh 1976a: 333, 1980c: 108, 1982: 197, 1983: 101; Peck 1988: 148.

Distribution: Sakhalin; Primorye, Priamurye.

Material examined: 1 male, Sakhalin: 15 (Fig. 2); July.

168. *Sphegina (Sphegina) violovitshi* Stackelberg, 1956

References: Stackelberg 1956a: 709, 1956b: 940; Violovitsh 1960a: 228, 1976a: 334, 1980c: 110, 1982: 198, 1983: 102; Kuwayama 1967: 115; Peck 1988: 149; Hirashima 1989: 790.

Distribution: Sakhalin, Kuril Islands; Honshu, Kyushu.

Material examined: 100 males, 107 females, Sakhalin 7, 9, 14, 17 (Fig. 2); Kunashir: 2, 4, 5, 13, 16-19 (Fig. 3); Shikotan; June-July.

169. *Pseudovolucella decipiens* (Hervé-Bazin 1914)

References: Violovitsh 1960a: 247, 1976a: 337, 1982: 206, 1983: 111; Kuwayama 1967: 120; Peck 1988: 151.

Distribution: Sakhalin, Moneron, Kunashir; Hokkaido, Honshu.

Material examined: 5 females, Sakhalin: 17 (Fig. 2); Kunashir: 1 (Fig. 3); Moneron; July-September.

170. *Sericomyia lappona* (Linnaeus, 1758)

References: Violovitsh 1960a: 247 (*Cinxia*), 1976a: 338, 1982: 206, 1983: 112.

Distribution: Sakhalin, Kuril Islands; Palaearctic.

Material examined: 4 males, 5 females, Sakhalin: 4, 17, 18 (Fig. 2); Kunashir: 6 (Fig. 3); June-August.

171. *Sericomyia nigra* Portshinsky, 1873

References: Violovitsh 1960a: 247 (*Cinxia*), 1976a: 338, 1982: 206.

Distribution: Sakhalin, Kuril Islands?; Palaearctic.

172. *Sericomyia sachalinica* Stackelberg, 1926

References: Stackelberg 1926: 92 (*Cinxia*); Shiraki 1930: 45, 46 (*S. japonica* Shiraki,

S. nigriceps Shiraki); Violovitsh 1960a: 247 (*Cinxia nigriceps* Shiraki), 1976a: 333, 1982: 206, 1983: 112; Kuwayama 1967: 120; Peck 1988: 152.

Distribution: Sakhalin, Kuril Islands; Hokkaido.

Material examined: 82 males, 110 females, Sakhalin: 5, 7, 14, 17, Nekrasovka Settlement, Chapaevo Settlement (Fig. 2); Kunashir: 1, 5, 7, 8, 11, 17-19 (Fig. 3); Shikotan; June-September.

173. *Eumerus japonicus* Matsumura, 1916

References: Violovitsh 1960a: 253, 1976a: 340, 1982: 132; Stackelberg 1961: 210; Peck 1988: 158; Hirashima 1989: 791.

Distribution: Sakhalin, Kunashir; Primorye; Korea; Honshu, Shikoku, Kyushu, Tsushima, Amami-Oshima Island, the Ryukyus.

Material examined: 2 females, Kunashir: 13 (Fig. 3); August.

174. *Eumerus strigatus* (Fallén, 1817)

References: Violovitsh 1960a: 253, 1976a: 340, 1982: 211, 1983: 131; Peck 1988: 163.

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 6 males, 7 females, Sakhalin: 7, 9, Sokol Settlement (Fig. 2); Kunashir: 5, 11 (Fig. 3); July-August.

175. *Psilota sibirica* Violovitsh, 1980

References: Violovitsh 1980b: 48, 1983: 95; Peck 1988: 177.

Distribution: Sakhalin, Kunashir; Siberia, Priamurye, Primorye.

Material examined: 1 male, Kunashir: 5 (Fig. 3); July.

176. *Arctosyrphus willingi* (Smith, 1912) *

Distribution: Sakhalin; northern part of the Holarctic.

Material examined: 2 males, 7 females, Sakhalin: 12, 13 (Fig. 2).

177. *Anasimyia japonica* (Shiraki, 1930)

References: Violovitsh 1960a: 245 (*Eurinomyia lineata* Fabricius, in part), 1976a: 339 (*Anasimyia* as subgenus of *Helophilus*), 1979b: 78 (as subgenus of *Helophilus*), 1982: 209 (*Eurimyia* as subgenus of *Helophilus*), 1983: 125 (*Eurimyia*); Peck, 1988: 195 [as *Helophilus (Anasimyia) lunulatus* Meigen]

Distribution: Sakhalin, Kuril Islands; Hokkaido.

Material examined: 1 male, Iturup; June.

178. *Anasimyia lineata* (Fabricius, 1787)

References: Violovitsh 1960a: 245 (*Eurinomyia*), 1976a: 339 (*Anasimyia* as subgenus of *Helophilus*), 1979b: 80 (*Eurimyia* as subgenus of *Helophilus*), 1982: 209 (*Eurimyia*), 1983: 126 (*Eurimyia*); Kuwayama 1967: 119 (*Eurinomyia*).

Distribution: Sakhalin, Kuril Islands; Palaearctic.

Material examined: 4 males, 5 females, Sakhalin: 13, 14, 19 (Fig. 2); June-July.

179. *Anasimyia lunulata* (Meigen, 1822)

Synonymy: *Helophilus (Anasimyia) pygmeus* Violovitsh, 1979 (n. syn.); *Helophilus (Anasimyia) inundata* Violovitsh, 1979 (n. syn.), *Helophilus (Parhelophilus) insignis* Violovitsh, 1979 (n. syn.)

References: Violovitsh 1960a: 245 (*Eurinomyia*), 1976a: 339 (*Anasimyia* as subgenus of *Helophilus*), 1979b: 76, 78 (as subgenus of *Helophilus*), 1980e: 267 [*Helophilus (Anasimyia) pygmeus*], 1982: 209, 1983: 125; Kuwayama 1967: 119 (*Eurinomyia*).

Distribution: Sakhalin, Kuril Islands; Holarctic.

Material examined: 27 males, 33 females, Sakhalin: 7, 12, 13, 17-19 (Fig. 2); Kunashir: 1, 12, 18-19 (Fig. 3); June-August.

Note: Recognizing *Anasimyia* as a subgenus of *Helophilus*, Violovitsh (1979) described three new species: *H. (Anasimyia) inundatus*, *H. (Anasimyia) pygmeus*, and *H. (Anasimyia) oblongus*. He provided a key to the species in which he compared the new species with *Anasimyia lunulata* and gave drawings of some parts of the male genitalia. However, the specimen with which he compared his new species was incorrectly identified and instead of drawing the gonocercus and surstylus of *A. lunulata*, he gave drawings of *A. interpuncta* (Harris). The specimens with Violovitsh's mistaken labels are in the ISEA. This first mistake led to a number of others. After a study of the holotype and description of *H. (Anasimyia) oblongus* and a comparison of its genitalia with those of *A. interpuncta*, we conclude that the two species are virtually identical. The differences in the color of the abdomen and size of the body used in Violovitsh's key are highly variable in *A. interpuncta*, as in all species of this genus, and thus cannot be used in species diagnoses. Therefore we consider *Helophilus (Anasimyia) oblongus* Violovitsh to be a junior synonym of *Anasimyia interpuncta* (Harris).

Comparison of the drawings of the surstylus of *A. pygmeus* and *A. inundatus* shows that they might be the same species. We have compared the type specimens of these species and found that the small differences that Violovitsh used to distinguish the new species are clearly inadequate. Moreover, both of these taxa lie within the limits of variation of *A. lunulata*. We therefore consider *Helophilus (Anasimyia) pygmeus* Violovitsh and *Helophilus (Anasimyia) inundatus* Violovitsh to be junior synonyms of *Anasimyia lunulata* (Meigen).

In the same work, Violovitsh described another species, which he placed in the subgenus *Parhelophilus*: *Helophilus (Parhelophilus) insignis* Violovitsh. After studying the type specimen we find that this taxon also belongs to *A. lunulata*. The distinctions used in the description result from weak melanization of the specimens studied, and the drawings of the surstylus were done using different orientations. Therefore we regard the name *Helophilus (Parhelophilus) insignis* Violovitsh as a junior synonym of *Anasimyia lunulata* (Meigen).

180. *Eristalinus sepulchralis* (Linnaeus, 1758)

Synonymy: *Eristalinus riki* Violovitsh, 1957 (n. syn.)

References: Violovitsh 1957: 752 (*E. riki*), 1960a: 243 (*E. riki*), 1976a: 338 (*E. riki*), 1982: 207 (*E. riki*), 1983: 120 (*E. riki*); Peck 1988: 181 (*E. riki*).

Distribution: Sakhalin, Kuril Islands?; Palaearctic, Oriental Region.

Material examined: 1 male, 5 females, Sakhalin: 12, 13 (Fig. 2); July.

Note: Comparison of the type of *E. riki* Violovitsh with specimens of *E. sepulchralis* (Linnaeus) from different parts of Siberia and the Far East has shown them to be identical. The distinctions used by Violovitsh in the description of *E. riki* lie within the limits of variation shown by *E. sepulchralis*.

181. *Eristalis (Eoseristalis) abusiva* Collin, 1952

References: Violovitsh 1982: 206.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 14 males, 12 females, Sakhalin: 5, 7, 9, 14, 17, Krilion (Fig. 2); Kunashir: 5 (Fig. 3); Iturup; June-September.

182. *Eristalis (Eoseristalis) alpina* (Panzer, 1798)**References:** Violovitsh 1960a: 241, 1976a: 338, 1982: 206, 1983: 117.**Distribution:** Sakhalin, Kunashir; Palaearctic.**Material examined:** 9 males, 7 females, Sakhalin: 7, 12, 13, 17 (Fig. 2); Kunashir: 3, 5, 17, 19 (Fig. 3); June-August.**183. *Eristalis (Eoseristalis) anthophorina* (Fallén, 1817)****Synonymy:** *Eristalis pacificus* Violovitsh, 1977 (n. syn.)**References:** Violovitsh 1960a: 243 (*Eristalomyia*), 1977: 68 (*E. pacificus*), 1980e: 267 (*E. pacificus*), 1982: 207 (*E. pacificus*), 1983: 116 (*E. pacificus*); Kuwayama 1967: 119 (*Eristalomyia anthophorina*); Peck 1988: 189 (*E. pacificus*).**Distribution:** Sakhalin, Kunashir, Iturup; Holarctic.**Material examined:** 27 males, 70 females, Sakhalin: 4, 7, 12-14, 17, Nekrasovka Settlement (Fig. 2).**Note:** Study of the holotype and paratypes of *E. pacificus* Violovitsh has shown that they are melanistic specimens of *E. anthophorina*. Such melanistic forms are widespread in the Far East. The sympatric distribution of typical and melanistic forms prevents the recognition of subspecies status for the specimens with a completely black abdomen.**184. *Eristalis (Eoseristalis) arbustorum* (Linnaeus, 1758)****References:** Violovitsh 1960a: 241, 1976a: 338, 1982: 207; Kuwayama 1967: 118.**Distribution:** Sakhalin, Kunashir; Holarctic, Oriental Region.**Material examined:** 4 males, 5 females, Sakhalin: 17 (Fig. 2); June-August.**185. *Eristalis (Eoseristalis) cerealis* Fabricius, 1805****References:** Matsumura 1916: 263 (*E. sachalinensis* Matsumura); Shiraki 1930: 130; Violovitsh 1960a: 242, 1976a: 338, 1982: 206, 1983: 116; Kuwayama 1967: 118; Peck 1988: 186.**Distribution:** Sakhalin, Kuril Islands; Priamurye, Primorye; Korea; China; Hokkaido, Honshu, Shikoku, Kyushu; Oriental Region.**Material examined:** 35 males, 22 females, Sakhalin: 3, 7, 9, 14, 17 (Fig. 2); Kunashir: 5, 19 (Fig. 3); Shikotan; June-September.**186. *Eristalis (Eoseristalis) interrupta* (Poda, 1761)****References:** Matsumura 1911: 75 (*E. toyoharae* Matsumura), 1916: 235 (*E. toyoharensis* Matsumura); Shiraki 1930: 132 (*E. nemorum* Linnaeus); Violovitsh 1960a: 242 (*E. nemorum*), 1976a: 338 (*E. nemorum*), 1982: 207 (*E. nemorum*); Kuwayama 1967: 119 (*E. nemorum*); Peck 1988: 188 (*E. nemorum*).**Distribution:** Sakhalin, Kunashir; Holarctic.**Material examined:** 40 males, 31 females, Sakhalin: 7, 9, 11-14, Chapaevo Settlement (Fig. 2); Kunashir: 3, 5, 19 (Fig. 3); June-August.**187. *Eristalis (Eoseristalis) japonica* Van der Goot, 1964****References:** Violovitsh 1960a: 242 (*E. nigricans* Matsumura), 1976a: 338 (*E. nigricans*), 1982: 207 (*E. nigricans*), 1983: 118 (*E. nigricans*); Kuwayama 1967: 119 (*E. nigricans*); Mutin 1984: 104 (*E. nigricans*); Peck 1988: 188.**Distribution:** Kunashir, Shikotan; Priamurye, Primorye; Hokkaido.**Material examined:** 3 males, 6 females, Kunashir: 9, 11, 17 (Fig. 3); July-August.

188. *Eristalis* (*Eoseristalis*) *rossica* Stackelberg, 1958 *

References: Violovitsh 1960a: 242 (*E. horticola* Degeer, *sensu* Violovitsh), 1976a: 338 (*E. horticola*), 1982: 207 (*E. horticola*), 1983: 117 (*E. horticola*); Peck 1988: 187 (*E. horticola*).

Distribution: Sakhalin, Kunashir; from Eastern Europe to Far East; Mongolia, China.

Material examined: 40 males, 28 females, Sakhalin: 7, 9, 11, 14, 16, Vtoraya Pady Station (Fig. 2); Kunashir: 2, 5, 18, 19 (Fig. 3); June-September.

Note: *Eristalis horticola* Degeer was recorded from Sakhalin on the basis of four females (Violovitsh 1960a), but we have been unable to find these specimens in any Russian collection. The eastern limit of the distribution of *E. horticola* is in the Tuva Republic. This species is similar to *E. rossica* and was confused with it for a long time. We think Violovitsh's citation of *E. horticola* from Sakhalin is incorrect.

189. *Eristalis* (*Eoseristalis*) *rupium* Fabricius, 1805

References: Violovitsh 1982: 207.

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 6 males, 23 females, Sakhalin: 4, 13, 14, 17 (Fig. 2); Kunashir: 17, 19 (Fig. 3).

190. *Eristalis* (*Eoseristalis*) *vitripennis* Strobl, 1893

References: Violovitsh 1982: 207.

Distribution: Sakhalin; Palaearctic.

Material examined: 6 males, 6 females, Sakhalin: 7, 14, 17, Vtoraya Pady Station (Fig. 2); June-July.

191. *Eristalis* (*Eristalis*) *tenax* (Linnaeus, 1758)

References: Violovitsh 1960a: 243 (*Eristalomyia*), 1976a: 339, 1982: 207; Kuwayama 1967: 119 (*Eristalomyia*).

Distribution: Sakhalin, Kuril Islands; cosmopolitan.

Material examined: 5 males, 7 females, Sakhalin: 2, 5, 16 (Fig. 2); Kunashir: 19 (Fig. 3); August-October.

192. *Helophilus affinis* Wahlberg, 1844

References: Violovitsh 1960a: 243 (*Tubifera*), 1976a: 339, 1979b: 71, 1982: 208.

Distribution: Sakhalin; Palaearctic.

193. *Helophilus groenlandicus* (Fabricius, 1780)

References: Violovitsh 1979b: 69, 1983: 122.

Distribution: Sakhalin?; Holarctic.

194. *Helophilus hybridus* Loew, 1846

References: Violovitsh 1982: 209.

Distribution: Sakhalin; Holarctic.

Material examined: 1 male, 1 female, Sakhalin: 13 (Fig. 2); July.

195. *Helophilus lapponicus* Wahlberg, 1864

References: Violovitsh 1960a: 243, 1976a: 339, 1982: 208, 1983: 122.

Distribution: Sakhalin, Iturup; Palaearctic.

Material examined: 3 males, 3 females, Sakhalin: 12, 13 (Fig. 2); July.

196. *Helophilus parallelus* (Harris, 1776)

References: Violovitsh 1976a: 339 (*H. trivittatus*), 1979b: 69 (*H. trivittatus*), 1982: 209

(*H. trivittatus*), 1983: 122 (*H. trivittatus*).

Distribution: Sakhalin; Palaearctic.

Material examined: 8 males, 8 females, Sakhalin: 3, 9, 13 (Fig. 2); June-August.

197. *Helophilus pendulus* (Linnaeus, 1758)

References: Matsumura 1911: 75; Violovitsh 1960a: 243 (*Tubifera*), 1976a: 339, 1979b: 73, 1982: 203.

Distribution: Sakhalin, Paramushir, Shumshu; Palaearctic.

Material examined: 14 males, 17 females, Sakhalin: 3, 13-15, 17 (Fig. 2); Paramushir; Shumshu; June-August.

198. *Helophilus sapporensis* Matsumura, 1911

References: Matsumura 1911: 75 (*H. pendulus* var. *sapporensis* Matsumura); Shiraki 1930: 166; Violovitsh 1960a: 244 (*Tubifera*), 1976a: 339, 1979b: 71, 1982: 208, 1983: 123; Kuwayama 1967: 119 (*Tubifera*); Peck 1988: 197.

Distribution: Sakhalin, Kuril Islands; Primorye, Priamurye; Hokkaido.

Material examined: 9 males, 9 females, Sakhalin: 5, 18 (Fig. 2); Kunashir: 4, 5, 12, 19 (Fig. 3); Shikotan; Iturup; June-August.

199. *Helophilus virgatus* Coquillett, 1898

References: Violovitsh 1960a: 246 (*Tubifera*), 1976a: 339, 1979b: 67, 1982: 208, 1983: 122; Kuwayama 1967: 119 (*Tubifera*); Peck 1988: 198.

Distribution: Sakhalin, Kuril Islands; Primorye; China; Hokkaido, Honshu, Shikoku, Kyushu.

Material examined: 16 males, 6 females, Sakhalin: 7, 14, 17 (Fig. 2); Kunashir: 1, 18, 19 (Fig. 3); Iturup; June-September.

200. *Mallota auricoma* Sack, 1910

References: Stackelberg 1950: 293; Violovitsh 1952: 56 (*M. aino* Violovitsh), 1960a: 245, 1976a: 340, 1978a: 166, 1982: 210, 1983: 128; Peck 1988: 200 (*M. aino*).

Distribution: Sakhalin, Kunashir?; from Eastern Europe to Primorye; Mongolia, North China.

Material examined: 2 males, 1 female, Sakhalin: 7, 13, 17 (Fig. 2).

201. *Mallota bicolor* Sack, 1910

References: Violovitsh 1960a: 246, 1976a: 340, 1978a: 167, 1982: 210, 1983: 128; Peck 1988: 200.

Distribution: Sakhalin, Kunashir; Priamurye, Primorye; northeast China.

Material examined: 3 males, Sakhalin: 17 (Fig. 2); July.

202. *Mallota dimorpha* Shiraki, 1930

References: Stackelberg 1950: 295, 1964: 472; Violovitsh 1952: 57 (*M. floreae* Violovitsh), 1955: 350, 1960a: 246, 1976a: 340, 1978a: 168, 1982: 210, 1983: 128; Kuwayama 1967: 119; Peck 1988: 200.

Distribution: Sakhalin, Kunashir, Shikotan; Priamurye, Primorye; North-East China; Hokkaido, Honshu.

Material examined: 4 males, 1 female, Sakhalin: 7 (Fig. 2); Kunashir; Shikotan; July-August.

203. *Mallota eurasiatica* Stackelberg, 1950 *

Distribution: Kunashir; from East Europe to Primorye; Korea.

Material examined: 1 male, Kunashir: 5 (Fig. 3); July.

204. *Mallota inopinata* Violovitsh, 1975

References: Violovitsh 1975b: 83, 1976a: 340, 1978a: 164, 1982: 210, 1983: 127; Peck 1988: 201.

Distribution: Sakhalin.

205. *Mallota japonica* Matsumura, 1916

References: Stackelberg 1950: 294; Violovitsh 1955: 355, 1960a: 246, 1976a: 340, 1978a: 167, 1982: 210, 1983: 128; Kuwayama 1967: 120; Peck 1988: 201.

Distribution: Sakhalin, Kunashir; Priamurye, Primorye; Hokkaido.

Material examined: 3 males, 6 females, Sakhalin: 3, 17 (Fig. 2); Kunashir: 17, 19 (Fig. 3).

206. *Mallota megilliformis* (Fallén, 1817)

References: Violovitsh 1960a: 246, 1976a: 340, 1978a: 164, 1982: 210, 1983: 127.

Material examined: 1 male, Sakhalin: 18 (Fig. 2); June.

207. *Mallota munda* Violovitsh, 1955

References: Violovitsh 1955: 355, 1960a: 246, 1976a: 340, 1978a: 166, 1982: 210, 1983: 128; Kuwayama 1967: 120; Peck 1988: 201.

Distribution: Kunashir.

Material examined: 2 females, Kunashir: 5 (Fig. 3); July-August.

208. *Mallota tricolor* Loew, 1871

References: Violovitsh 1978a: 164, 1982: 210, 1983: 127; Peck 1988: 202.

Distribution: Sakhalin; Palaearctic.

209. *Parhelophilus consimilis* (Malm, 1863)

References: Violovitsh 1960a: 244, 1976a: 339 (*Parhelophilus* as subgenus of *Helophilus*), 1982: 209.

Distribution: Sakhalin; Palaearctic.

Material examined: 2 males, Sakhalin: 13 (Fig. 2); August.

210. *Parhelophilus kurenzovi* Violovitsh, 1960

Synonymy: *Parhelophilus obscurior* Violovitsh, 1960 (n. syn.)

References: Violovitsh 1960a: 207, 209 (*P. obscurior*), 1960a: 244, 245 (*P. obscurior*), 1976a: 339 (*Parhelophilus* as subgenus of *Helophilus*), 1979b: 75 [*H. (P.) obscurior*], 1982: 209 (*P. obscurior*), 1983: 124 (*P. obscurior*); Kuwayama 1967: 119; Peck 1988: 199 (*P. obscurior*).

Distribution: Sakhalin, Kunashir; Primorye?

Material examined: 20 males, 14 females, Sakhalin: 13, 17 (Fig. 2); Kunashir: 2, 5 (Fig. 3); June-August.

Note: We have studied the types of *P. kurenzovi* and *P. obscurior* and have come to the conclusion that they belong to the same species. Differences in the color of the legs lie within the limits of intraspecific variation. Differences in the form of the genitalia given in the descriptions of these taxa result from differences in orientation of the preparations during drawing.

211. *Blera eoa* Stackelberg, 1928

References: Violovitsh 1976a: 341, 1982: 212, 1983: 139; Peck 1988: 204; Barkalov and Mutin 1991: 747.

Distribution: Sakhalin; from Altai to Primorye.

Material examined: 2 males, 6 females, Sakhalin: 15 (Fig. 2); June-August.

212. *Blera fallax* (Linnaeus, 1758)

References: Violovitsh 1960a: 248 (*Cynorrhina*), 1976a: 341, 1982: 212, 1983: 139; Peck 1988: 204; Barkalov and Mutin 1991: 745.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 1 male, 1 female, Sakhalin: 17 (Fig. 2); June-August.

213. *Blera japonica* (Shiraki, 1930)

References: Violovitsh 1960a: 248 (*Cynorrhina nitens* Stackelberg, *sensu* Violovitsh), 1976a: 341 (*B. nitens*), 1982: 212 (*B. nitens*), 1983: 138; Peck 1988: 205; Hirashima, 1989: 793.

Distribution: Sakhalin, Kunashir; Primorye, Priamurye; Korea; Hokkaido, Honshu.

Material examined: 7 males, 5 females, Sakhalin: 17 (Fig. 2); Kunashir: 5, 18, 19 (Fig. 3); June-July.

214. *Criorhina aino* (Stackelberg, 1955)

References: Stackelberg 1955b: 347 (*Penthesilea*); Violovitsh 1960a: 249 (*Penthesilea*), 1974a: 127 (*C. tsherepanovi* Violovitsh), 1976a: 341 (*C. tsherepanovi*), 1982: 211, 212 (*C. tsherepanovi*), 1983: 137, 138 (*C. tsherepanovi*); Peck 1988: 207, 208 (*C. tsherepanovi*).

Distribution: Sakhalin, Shikotan; from Altai to Primorye.

Material examined: 1 male, 1 female, Sakhalin; Shikotan; July-August.

215. *Criorhina brevipila* Loew, 1871

References: Stackelberg 1955b: 348 (*Penthesilea*); Violovitsh 1960a: 249 (*Penthesilea*), 1973: 114 (*C. montivaga* Violovitsh), 1976a: 341, 1982: 211, 1983: 138; Peck 1988: 207.

Distribution: Sakhalin; from Ural to Primorye; Mongolia, Korea.

Material examined: 6 males, 1 female, Sakhalin: 7, 17 (Fig. 2); Iturup: 5 km south of Kurilsk; August.

216. *Criorhina konakovi* (Stackelberg, 1955)

References: Stackelberg 1955b: 341 (*Penthesilea*); Violovitsh 1960a: 249 (*Penthesilea*), 1974a: 125, 1976a: 341, 1982: 211, 1983: 137; Peck 1988: 207.

Distribution: Urup.

Material examined: 1 male, Urup: Kaiso Mountain; July.

217. *Criorhina narumii* (Shiraki, 1952), n. comb. *

Distribution: Kunashir; Honshu.

Material examined: 1 female, Kunashir.

Note: We have studied the male and female of *Narumia narumii* Shiraki from Japan (Honshu) and the female from Kunashir. It is apparent that this species has many features in common with species of the genus *Criorhina*. Male genitalia of *N. narumii* are also very similar to those of *Criorhina* (Fig. 6). The most characteristic feature of the genus *Narumia* is thought to be the dorso-apical position of the arista, but many species of *Criorhina* also have the apical part of the third antennal segment elongate, with the arista situated near the top of the antenna. We conclude therefore that *Narumia* is a junior synonym of *Criorhina*.

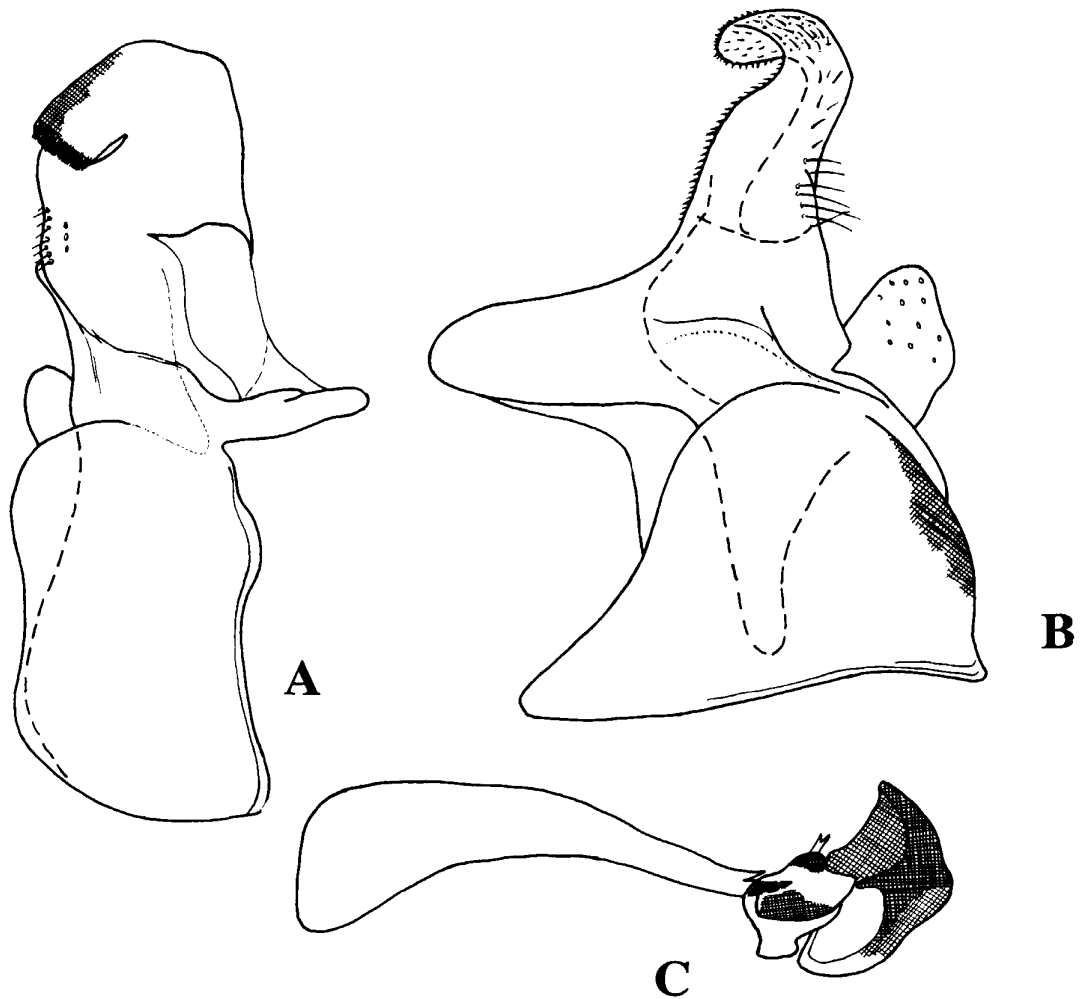


Fig. 6. *Criorhina narumii* (Shiraki), genitalia of male: A. Lateral view of sternite IX; B. Lateral view of tergite IX; C. Lateral view of aedeagus.

218. *Criorhina ussuriana* (Stackelberg, 1955)

References: Stackelberg 1955b: 346 (*Penthesilea*); Violovitsh 1960a: 249 (*Penthesilea*), 1974a: 126, 1976a: 341, 1983: 137; Peck 1988: 208.

Distribution: Kunashir, Urup; Priamurye, Primorye.

Material examined: 1 female, Kunashir: 5 (Fig. 3); July.

219. *Lejota ruficornis* (Zetterstedt, 1843)

References: Violovitsh 1982: 200, 1983: 97; Peck 1988: 209.

Distribution: Sakhalin; Palaearctic.

Material examined: 1 male, Sakhalin: 17 (Fig. 2); June.

220. *Macrozelima hervei* (Shiraki, 1930)

References: Violovitsh 1960a: 254, 1976a: 342, 1982: 214, 1983: 146; Kuwayama 1967: 121; Peck 1988: 209.

Distribution: Kunashir; Primorye; Japan.

Material examined: 1 male, 1 female, Kunashir: 11 (Fig. 3); August.

221. *Matsumyia jesoensis* (Matsumura, 1911)

References: Matsumura 1911: 78 (*Priomerus*); Shiraki 1930: 59 (*Cynorrhina*); Violovitsh 1955: 354, 1960a: 248, 1976a: 341, 1982: 205, 1983: 140; Kuwayama 1967: 120; Peck 1988: 209.

Distribution: Sakhalin, Kunashir; Hokkaido, Honshu.

Material examined: 4 males, 2 females, Sakhalin: 20 (Fig. 2); Kunashir: 1, 5, 18 (Fig. 3); July-August.

222. *Matsumyia nigrofacies* Shiraki, 1949

References: Violovitsh 1955: 352, 1960a: 248, 1976a: 341, 1982: 206, 1983: 140; Kuwayama 1967: 120; Peck 1988: 209.

Distribution: Sakhalin, Iturup, Kunashir; Hokkaido, Honshu.

Material examined: 15 males, 10 females, Sakhalin: 21 (Fig. 2); Kunashir: 1, 5, 18-19, Vodopadnoe Settlement (Fig. 3); Iturup; June-August.

223. *Milesia undulata* Snellen van Vollenhoven, 1863

References: Matsumura 1911: 74; Shiraki 1930: 117; Violovitsh 1960a: 255, 1976a: 343, 1982: 214, 1983: 148; Peck 1988: 210; Hippa 1990: 63; Hirashima 1989: 793.

Distribution: Sakhalin?; Hokkaido, Honshu, Shikoku, Kyushu.

224. *Pseudopocota stackelbergi* (Violovitsh, 1957)

References: Violovitsh 1957: 753 (*Pocota*), 1960a: 249 (*Pocota*), 1976a: 341 (*Pocota*), 1982: 212 (*Pocota*), 1983: 136 (*Pocota*); Peck 1988: 212 (*Pocota*).

Distribution: Sakhalin; Primorye.

Material examined: 1 male, Sakhalin: 15 (Fig. 2).

225. *Pterallastes unicolor* (Shiraki, 1930)

References: Violovitsh 1955: 350 (*Mallota*), 1960a: 247 (*Mallota*), 1976a: 340 (*Mallota*), 1978a: 165 (*Mallota*), 1982: 210 (*Mallota*), 1983: 12 (*Mallota*); Kuwayama, 1967: 120 (*Mallota*); Peck, 1988: 212.

Distribution: Sakhalin, Kunashir; Hokkaido, Honshu.

Material examined: 9 males, 3 females, Sakhalin: Nevelsk (Fig. 2); Kunashir: 1, 13, 17 (Fig. 3); June-August.

226. *Spilomyia diophthalma* (Linnaeus, 1758)

References: Violovitsh 1960a: 255, 1976a: 3343, 1982: 214, 1983: 149.

Distribution: Sakhalin; Palaearctic.

Material examined: 1 female, Sakhalin: 7 (Fig. 2); August.

227. *Spilomyia maxima* Sack, 1910

References: Violovitsh 1960a: 255, 1976a: 343, 1982: 214, 1983: 149; Peck 1988: 214.

Distribution: Sakhalin, Kunashir; from Eastern Europe to Kamchatka, Primorye; Mongolia.

Material examined: 1 male, 1 female, Sakhalin: 7 (Fig. 2); Kunashir; August.

228. *Spilomyia permagna* Stackelberg, 1958

References: Stackelberg 1958: 764; Violovitsh 1960a: 255, 1976a: 343, 1982: 214, 1983: 148; Kuwayama 1967: 122; Peck 1988: 214.

Distribution: Sakhalin, Kunashir.

Material examined: 2 males, 2 females, Kunashir: 1 (Fig. 3); August.

229. *Spilomyia suzukii* Matsumura, 1916

References: Violovitsh 1960a: 225, 1976a: 343, 1982: 215, 1983: 148; Kuwayama 1967: 122; Peck 1988: 214.

Distribution: Iturup, Kunashir; Primorye; Hokkaido, Honshu, Shikoku.

Material examined: 3 males, Kunashir: 1 (Fig. 3); August.

230. *Syritta pipiens* (Linnaeus, 1758)

References: Violovitsh 1960a: 253, 1976a: 342, 1982: 214, 1983: 146; Kuwayama 1967: 121.

Distribution: Sakhalin, Iturup, Kunashir; Holarctic; Oriental Region.

Material examined: 14 males, 28 females, Sakhalin: 7, 9, 14, 17 (Fig. 2); Kunashir: 5, 19, Otradnoe Settlement (Fig. 3); Iturup; June-September.

231. *Takaomyia sexmaculata* (Matsumura, 1916)

References: Violovitsh 1960a: 255, 1976a: 343, 1982: 215, 1983: 150; Kuwayama 1967: 122; Peck 1988: 216.

Distribution: Kunashir; Hokkaido, Shikoku.

Material examined: 1 male, 3 females, Kunashir: 11, 18 (Fig. 3); June-August.

232. *Temnostoma apiforme* (Fabricius, 1794)

References: Violovitsh 1960a: 254 (*T. pallidum* Sack), 1976a: 243, 1982: 215, 1983: 149; Kuwayama 1967: 121 (*T. pallidum*).

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 4 males, 9 females, Sakhalin: 7, Chapaevo Settlement (Fig. 2); Kunashir: 1, 2, 5 (Fig. 3); July-August.

233. *Temnostoma bombylans* (Fabricius, 1805)

References: Violovitsh 1960a: 254 (part), 1976a: 343 (part), 1982: 215 (part); Kuwayama 1967: 121.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 2 males, 1 female, Sakhalin: 17 (Fig. 2); Kunashir: 4, 5 (Fig. 3); July-August.

234. *Temnostoma nitobei* Matsumura, 1916 *

References: Violovitsh 1960a: 254 (*T. bombylans*, in part), 1976a: 343 (*T. bombylans*, in part), 1982: 215 (*T. bombylans*, in part).

Distribution: Kunashir; Primorye, Priamurye; Japan.

Material examined: 5 males, 3 females, Kunashir: 1, 5, 13, Nasarovo Settlement (Fig. 3); July-August.

235. *Temnostoma vespiforme* (Linnaeus, 1758)

References: Violovitsh 1960a: 254, 1976a: 343, 1982: 215; Kuwayama 1967: 121.

Distribution: Sakhalin, Kunashir; Holarctic.

Material examined: 8 males, 15 females, Sakhalin: 7 (Fig. 2); Kunashir: 1, 4, 5, 19 (Fig. 3); July-August.

236. *Tropidia scita* (Harris, 1780)

References: Violovitsh 1960a: 250, 1976a: 341, 1982: 211, 1983: 135; Peck 1988: 218.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 10 males, 6 females, Sakhalin: 20, Lugovoe Settlement (Fig. 2); Kunashir: 2, 5, 11 (Fig. 3); June-July.

237. *Brachypalpoides flavifacies* (Shiraki, 1930)

References: Violovitsh 1982: 213 (*Xylota*), 1983: 141 (*Xylota*); Peck 1988: 218; Hirashima 1989: 794.

Distribution: Kunashir; Hokkaido, Honshu, Shikoku, Kyushu.

Material examined: 1 male, 1 female, Kunashir: Mendeleeva Volcano; August.

238. *Brachypalpoides simplex* (Shiraki, 1930)

References: Violovitsh 1955: 356 (*Zelima nigerrima* Violovitsh), 1956a: 472 (*Zelima nox* Violovitsh), 1960a: 252 (*Z. nox*), 1976a: 342 (*Xylota nox*), 1982: 213 (*X. nox*), 1983: 141 (*X. nox*); Kuwayama 1967: 121 (*Zelima nox*); Mutin 1985: 88; Peck 1988: 219; Hirashima 1989: 794.

Distribution: Sakhalin, Kunashir; Honshu.

Material examined: 5 males, 1 female, Kunashir: 5, 11 (Fig. 3); July-August.

239. *Brachypalpus nipponicus* Shiraki, 1952

References: Violovitsh 1960a: 249 (*B. dentitibia* Stackelberg), 1976a: 341, 1982: 212, 1983: 139; Peck 1988: 219; Stackelberg 1965: 919; Hirashima 1989: 794.

Distribution: Sakhalin, Kunashir; Siberia, Far East; Honshu.

Material examined: 1 male, Sakhalin: 17 (Fig. 2); June.

240. *Chalcosyrphus* (*Chalcosyrphus*) *tuberculifemur* (Stackelberg, 1963)

References: Violovitsh 1982: 214 (*Xylota*).

Distribution: Sakhalin?; Siberia, Far East.

241. *Chalcosyrphus* (*Xylotina*) *nemorum* (Fabricius, 1805)

References: Violovitsh 1960a: 252 (*Zelima*), 1976a: 342 (*Xylota*), 1982: 213 (*Xylota*); Kuwayama 1967: 121 (*Zelima*).

Distribution: Sakhalin, Kunashir, Shikotan; Holarctic.

Material examined: 38 males, 8 females, Sakhalin: 7, 14 (Fig. 2); Kunashir: 5, 13, 16, 18, 19 (Fig. 3); Shikotan: Malo-Kurilsk; June-July.

242. *Chalcosyrphus* (*Xylotina*) *nitidus* (Portschinsky, 1879)

References: Violovitsh 1960a: 252 (*Zelima*), 1976a: 342 (*Xylota*), 1982: 213 (*Xylota*), 1983: 143 (*Xylota*); Kuwayama 1967: 121 (*Zelima niteida*); Peck 1988: 221.

Distribution: Sakhalin, Kunashir, Iturup; from Eastern Europe to Primorye; northern China.

Material examined: 3 males, 2 females, Kunashir: 5, 18, 19 (Fig. 3); July.

243. *Chalcosyrphus* (*Xylotodes*) *jacobsoni* (Stackelberg, 1921)

References: Violovitsh 1960a: 252 (*Zelima*), 1976a: 342 (*Xylota*), 1982: 213 (*Xylota*), 1983: 144 (*Xylota*).

Distribution: Sakhalin, Kunashir?; Palaearctic.

Material examined: 2 males, 1 female, Sakhalin: Bykovo Settlement, Vtoraya Pady Station; June-July.

244. *Chalcosyrphus* (*Xylotodes*) *nigricans* (Shiraki, 1968) *

Distribution: Kunashir; Japan.

Material examined: 1 male, 1 female, Kunashir: 1, 11, 13 (Fig. 3); July-August.

245. *Chalcosyrphus* (*Xylotomima*) *amurensis* (Stackelberg, 1925)

References: Violovitsh 1960a: 250 (*Zelima*), 1976a: 342 (*Xylota*).

Distribution: Sakhalin; Priamurye, Primorye.

Material examined: 1 male, Sakhalin: 17 (Fig. 2); May.

246. *Chalcosyrphus (Xylotomima) femoratus* (Linnaeus, 1758)

References: Violovitsh 1960a: 251 (*Zelima curvipes* Loew), 1976a: 342 (*Xylota curvipes*, *X. sapporensis* Shiraki), 1982: 212 (*X. curvipes*, *X. sapporensis*), 1983: 141 (*X. curvipes*, *X. sapporensis*); Peck 1988: 223 [*C. (X.) sapporensis* (Shiraki)]

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 1 male, Kunashir: 5 (Fig. 3); July.

247. *Chalcosyrphus (Xylotomima) longus* (Coquillett, 1898)

References: Violovitsh 1960a: 252 (*Zeloma*), 1976a: 342 (*Xylota*), 1982: 213 (*Xylota*), 1983: 142 (*Xylota*); Kuwayama 1967: 121 (*Zelima*); Peck 1988: 223.

Material examined: 1 female, Kunashir: 2 (Fig. 3); July.

248. *Chalcosyrphus (Xylotomima) valgus* (Gmelin, 1790)

References: Violovitsh 1960a: 251 (*Zelima femorata* Linnaeus), 1976a: 342 (*Xylota femorata*), 1982: 213 (*X. femorata*).

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 1 female, Kunashir: 5 (Fig. 3); July.

249. *Xylota (Xylota) semulatra* (Harris, 1780)

References: Violovitsh 1960a: 250 (*Zelima abiens* Meigen), 1976a: 341 (*X. abiens*), 1982: 212 (*X. abiens*), 1983: 144 (*X. abiens*); Kuwayama 1967: 120 (*Zelima*).

Distribution: Sakhalin, Kunashir; Palaearctic.

250. *Xylota (Xylota) coeruleiventris* Zetterstedt, 1938

References: Violovitsh 1960a: 250 (*Zelima*), 1976a: 342, 1982: 213; Kuwayama 1967: 120.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 1 male, 3 females, Sakhalin: 7; Kunashir: Lechebnyi Spring; June-July.

251. *Xylota (Xylota) coquilletti* Hervé-Bazin, 1914

References: Violovitsh 1960a: 250 (*Zelima*), 1976a: 342, 1982: 212, 1983: 143; Kuwayama 1967: 120; Peck 1983: 225.

Distribution: Sakhalin, Kunashir; from Altai to Primorye; Hokkaido, Honshu; Oriental Region.

Material examined: 10 males, 4 females, Sakhalin: 9, 17 (Fig. 2); Kunashir: 1, 11, 17, 19 (Fig. 3); Shikotan: Malo-Kurilsk; June-August.

252. *Xylota (Xylota) ignava* (Panzer, 1798)

References: Matsumura 1911: 74 (*Xylota basalis* Matsumura); Stackelberg 1952: 326; Violovitsh 1960a: 251 (*Zelima*), 1976a: 342, 1982: 213; Kuwayama 1967: 121 (*Zelima*); Peck 1988: 225.

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 13 males, 10 females, Sakhalin: 3, 7, 12-14, 16, 17 (Fig. 2); June-July.

253. *Xylota (Xylota) isokoeae* Shiraki, 1968

References: Violovitsh 1960a: 251 (*Zelima florum* Fabricius *sensu* Violovitsh, in part; *Z. sibirica* Loew *sensu* Violovitsh, in part), 1976a: 342 (*X. florum*, *X. sibirica*), 1982: 213 (*X. florum*, *X. sibirica*); Hirashima 1989: 795; Mutin 1990b: 114.

Distribution: Sakhalin, Kunashir; Honshu, Kyushu.

Material examined: 15 males, 7 females, Sakhalin: 14, 17 (Fig. 2); Kunashir: 11, 17 (Fig. 3); July-August.

254. *Xylota* (*Xylota*) *jakutorum* Bagatshanova, 1980 *

Distribution: Sakhalin; Palaearctic.

Material examined: 1 female, Sakhalin: 17 (Fig. 2); July.

255. *Xylota* (*Xylota*) *lapsa* Mutin, 1990

References: Violovitsh 1960a: 253 (*Zelima sibirica* Loew *sensu* Violovitsh, in part; *Z. florum* Fabricius *sensu* Violovitsh, in part), 1976a: 342 (*Xylota florum*, *X. sibirica*), 1982: 213 (*X. florum*, *X. sibirica*); Kuwayama 1967: 121 (*Zelima sibirica*); Mutin 1990b: 112.

Distribution: Sakhalin, Kunashir?; southern Siberia, Primorye, Priamurye.

Material examined: 6 males, 5 females, Sakhalin: Leonidovo Settlement; July.

256. *Xylota* (*Xylota*) *meigeniana* Stackelberg, 1964

References: Violovitsh 1982: 213; Peck 1988: 226.

Distribution: Sakhalin; Palaearctic.

257. *Xylota* (*Xylota*) *nartshukae* Bagatshanova, 1984 *

References: Violovitsh 1960a: 252 (*Zelima japonica* Shiraki *sensu* Stackelberg, 1952), 1976a: 342 (*Xylota japonica*), 1982: 213 (*X. japonica*), 1983: 143 (*X. japonica*); Kuwayama 1967: 121 (*Zelima japonica*).

Distribution: Sakhalin, Kunashir?; Siberia, Priamurye, Primorye.

258. *Xylota* (*Xylota*) *tarda* Meigen, 1822

References: Violovitsh 1982: 214, 1983: 144.

Distribution: Sakhalin, Kuril Islands?; Palaearctic.

259. *Xylota* (*Xylota*) *triangularis* Zetterstedt, 1838

References: Violovitsh 1960a: 253 (*Zelima*), 1976a: 242, 1982: 214; Kuwayama 1967: 121 (*Zelima*).

Distribution: Sakhalin, Kunashir; Palaearctic.

Material examined: 1 male, Sakhalin: 12 (Fig. 2); July.

260. *Xylota* (*Xylota*) *umbrosa* Violovitsh, 1975

References: Violovitsh 1982: 214; Peck 1988: 226.

Distribution: Sakhalin?; Priamurye, Primorye.

261. *Microdon latifrons* Loew, 1856

References: Violovitsh 1960a: 256, 1976a: 340, 1983: 153; Peck 1988: 228.

Distribution: Sakhalin; Palaearctic.

Material examined: 1 female, Sakhalin: 17 (Fig. 2); June.

List of Doubtful Species

1. *Eupeodes* (*Eupeodes*) *karafutonis* (Matsumura, 1917)

References: Matsumura and Adachi 1917a: 148 (*Metasyrphus*); Peck 1988: 34 (*Metasyrphus*).

Distribution: Sakhalin.

Note: This species is mentioned from Sakhalin only in the original description and it

is otherwise not cited in any publication; we did not find it among the material we examined. The type material must be re-examined to understand its taxonomy.

2. *Eupeodes (Eupeodes) kawaguchii* (Matsumura, 1917)

References: Matsumura and Adachi 1917a: 149 (*Metasyrphus*); Peck 1988: 34.

Distribution: Sakhalin.

Note: This species is mentioned from Sakhalin only in the original description and it is otherwise not cited in any publication; we did not find it among the material we examined. The type material must be re-examined to understand its taxonomy.

3. *Scaeva selenitica* (Meigen, 1822)

References: Violovitsh 1960a: 233, 1975a: 177, 1976a: 339, 1982: 190, 1983: 47.

Distribution: Sakhalin?; Palaearctic, Oriental Region.

Note: We have checked all the collections in which material examined by Violovitsh might be kept, but none contained material of this species. This species is unknown from the Far East.

4. *Syrphus mikado* Matsumura, 1917

References: Kuwayama 1967: 117.

Distribution: Shikotan; Hokkaido.

Note: This species is unknown to us.

5. *Sphaerophoria cylindrica* (Say, 1824)

References: Matsumura 1931: 350; Violovitsh 1960a: 102, 1976a: 331; Kuwayama 1967: 118.

Distribution: Sakhalin?, Kunashir?; Palaearctic.

Note: Violovitsh (1960, 1976a) considered this species to be very common in Sakhalin and the Kuril Islands, but in his later faunistic and taxonomic works (1982, 1983) it is not mentioned as occurring east of the Ural Mountains.

6. *Sphaerophoria menthastris* (Linnaeus, 1758)

References: Shiraki 1930; Violovitsh 1960a: 240, 1976a: 331; Kuwayama 1967: 118.

Distribution: Kuril Islands?; Palaearctic.

Note: The vast material mentioned by Violovitsh (1960a) in his primary work on the syrphid fauna of Sakhalin and the Kuril Islands has not been found in any zoological museum in Russia. In his later papers, Violovitsh does not mention this species, which perhaps indicates its absence from Sakhalin and the Kuril Islands.

7. *Melanostoma tenuis* Matsumura, 1919

References: Matsumura and Adachi 1919: 135.

Distribution: Sakhalin.

Note: We have not found this species in our material; it is known by its original description only and its taxonomy needs special study.

8. *Heringia heringi* (Zetterstedt, 1843)

References: Violovitsh 1983: 66 [*Pipiza dubia* (Lundbeck)]

Distribution: Sakhalin?, Kunashir?; Palaearctic.

Note: Violovitsh (1983) noted *Pipiza dubia* Lundbeck, 1916, from both Sakhalin and the Kuril Islands; *Heringia heringi* (Zetterstedt) was noted only from Tuva. In his last work reviewing the genus *Pipiza*, Violovitsh (1988) treated *P. dubia* (Lundbeck) as a member of the genus *Heringia*. Peck (1988) placed *P. dubia* as a synonym of *H.*

heringi and noted the eastern limit of its distribution as West Siberia and Mongolia. We have not found any specimens of *H. heringi* in our material, nor in material from Sakhalin in any of the Russian zoological collections. We think therefore the species was recorded from Sakhalin in error.

9. ***Pipizella virens*** (Fabricius, 1805)

References: Violovitsh 1960a: 221 (*Heringia*), 1976a: 334; Kuwayama 1967: 112 (*Heringia*).

Distribution: Sakhalin?, Kunashir?; Palaearctic.

Note: We have not found any specimens of this species from Sakhalin or the Kuril Islands. Violovitsh (1981) wrote that he had recorded the species erroneously.

10. ***Pipiza carbonaria*** (Meigen, 1822)

References: Violovitsh 1983: 66.

Distribution: Sakhalin?; Europe.

Note: This species was mentioned by Violovitsh (1983), but it was absent in his later survey of the genus *Pipiza* (Violovitsh 1988).

11. ***Pipiza yezoensis*** Matsumura, 1916

References: Matsumura and Adachi 1916: 14, pl. 1, Fig. 21, Kuwayama 1967: 112.

Distribution: Sakhalin?; Kunashir?; Hokkaido.

Note: We have not seen material of this species. The records for Sakhalin and Kunashir were published by Matsumura (1916) and Kuwayama (1967).

12. ***Cheilosia lata*** Shiraki, 1930

References: Kuwayama 1967: 113.

Distribution: Kunashir?, Shikotan?; Hokkaido.

Note: The only record of this species from the Kuril Islands is by Kuwayama (1967). Shiraki's (1930) original description is based on material from Hokkaido (Japan).

13. ***Cheilosia (Cheilosia) okunii*** (Shiraki, 1930)

References: Violovitsh 1960a: 225, 1976a: 336, 1982: 203; Hirashima 1989: 789.

Distribution: Sakhalin?, Urup?; Hokkaido, Honshu, Kyushu.

Note: This species is not present in the material examined. Violovitsh noted the species incorrectly.

14. ***Rhingia campestris*** Meigen, 1822

References: Violovitsh 1982: 195.

Distribution: Sakhalin?, Kuril Islands?; Palaearctic.

Note: We have not found this species from Sakhalin or the Kuril Islands in any zoological collection in Russia. We suspect that it may be found in the northern part of Sakhalin because it was found in the neighbourhood of the port Vanino in the Far East.

15. ***Sphegina (Asiosphegina) grunini*** Stackelberg, 1953

References: Stackelberg 1956: 707, Violovitsh 1960a: 227, 1976a: 333, 1982: 197; Kuwayama 1967: 114.

Distribution: Kunashir?; South Primorye.

Note: The first record of this species from Kunashir was published by Stackelberg (1956). Three years earlier, in his original description of the species, Stackelberg wrote that it was known only from the southern Primorye. We have checked the

specimens studied by Stackelberg, but did not find any specimens of *S. grunini* from Kunashir. We also did not find it in our material. It is possible that the specimens identified as *S. grunini* from Kunashir are, in fact, the very similar species *S. elongata*.

16. *Sphegina (Sphegina) clunipes* (Fallén, 1817)

References: Kuwayama 1967: 115.

Distribution: Kunashir?, Shikotan?; Palaearctic.

Note: The species is not present in our material; the only record of it in the Kuril Islands was published by Kuwayama (1967).

17. *Eristalis miki* Violovitsh, *nomen nudum*

References: Violovitsh 1960a: 242; Kuwayama 1967: 118.

Distribution: Kunashir?

Note: This name has apparently never been validly published and made available; we have been unable to find any material labeled "*Eristalis miki* Violovitsh" in any Russian zoological museum.

18. *Spilomyia saltuum* (Fabricius, 1794)

References: Violovitsh 1976a: 343, 1982: 214.

Distribution: Sakhalin?, Kuril Islands?; Europe, Caucasus.

Note: We have not found material of this species from Sakhalin or the Kuril Islands in any Russian collection. Peck (1988) gave its distribution as entirely western Palaearctic.

19. *Tropidia fasciata* (Meigen, 1822)

References: Violovitsh 1960a: 250, 1976a: 341, 1982: 211, 1983: 35; Kuwayama 1967: 120; Peck 1988: 218.

Distribution: Kunashir?; Western Europe.

Note: We have not found this species in our material.

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